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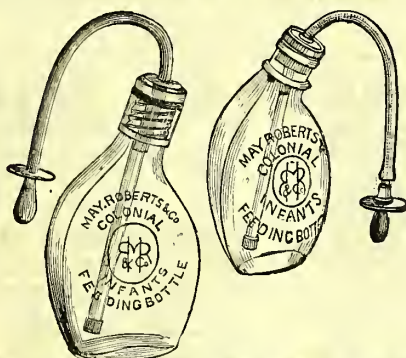
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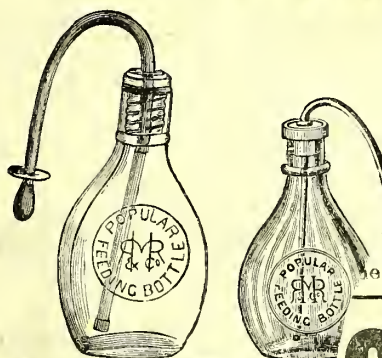
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Advertisements in this department must be paid for in advance. From this rule no deviation can be made. Insertions are charged at the rate of 1d. per word, provided the advertiser attaches his name and address, for each word of which he must also pay at the same rate; or if he pays 1d. per word his name and address will be registered and a figure attached to his advertisement. All correspondence referring to that figure must be addressed to "The Publisher of the CHEMIST AND DRUGGIST, 42 Cannon Street, E.C." and the figure must be distinctly endorsed upon the envelope. Letters will then be forwarded to their proper destination. A price is counted as one word, as e.g., £1 10s. 6d.

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Drawers, 12 ft. run, with glass labels, shelves, lockers, and cornice, price 13l.; 6 ft. dispensing-screen, mirror centre, 6l. 10s.; sponge-case, 90s.; toothbrush-case, 40s.; all in good condition. Philip Josephs, 54 Old Street, Goswell Road, London, E.C.

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20 ft. run mahogany-fronted drawers (second-hand), bottle-lockers under, shelving and cornice over, bargain; 50 doz. gold-labelled shop-rounds, 6 to 40 oz., 6s. 6d. doz.; 6 doz. 1-gallon black store-bottles, japanned caps, gold-labelled, 15s. doz.; a lot specie-jars, Royal and other arms, 20 in. high, from 15s. each; carboys, ointment-jars, scales and weights, pill-machines, mortars, and a quantity other utensils. Also plate-glass fronted counters; mahogany-panelled fronted do.; pine-panelled fronted do., with mahogany tops, all sizes; show-cases, bent and flat, dispensing-screens, mirrors, &c., being the entire fittings of two chemists' shops just purchased, and to be sold at a sacrifice through press for room. Note my only address, Elkinnah Natali, 242 Old Street (12 doors from City Road), London, E.C.

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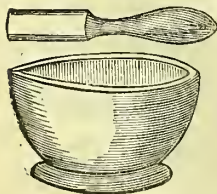
Dispensing-scales, Maw's figs. 7-9; approval. Hinde, Banbury.

Check-till, in working order, on approval. Duck, Arcade, Cardiff.

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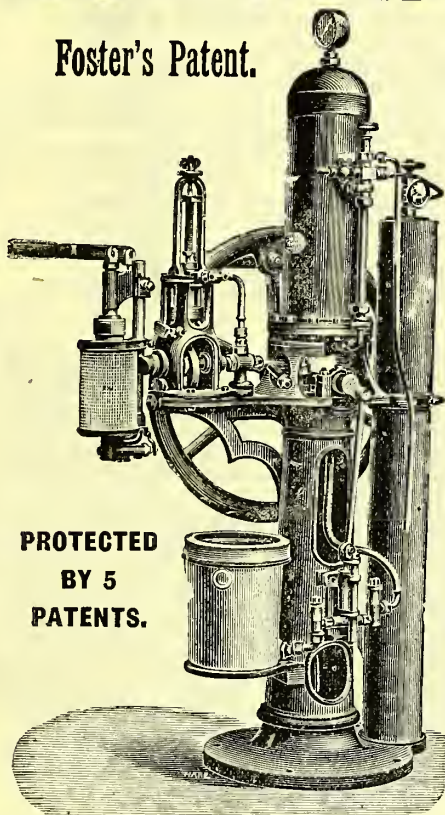
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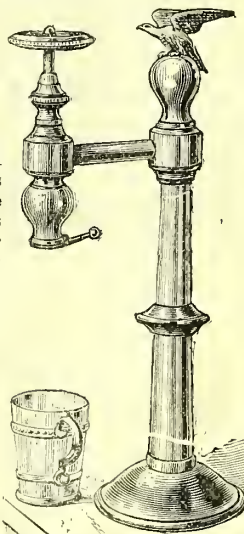
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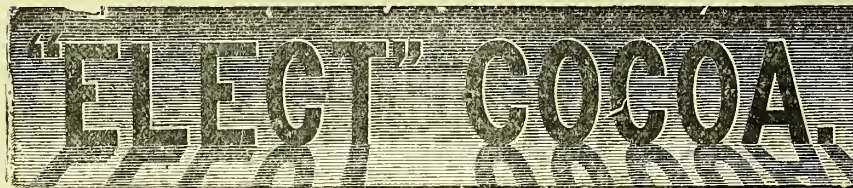
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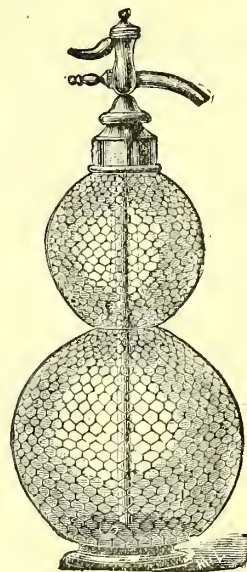
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HERB OR BOTANIC BEER
A NON-INTOXICATING BEVERAGE

Full of Body and Flavour, with a Creamy Head like Bottled Ale, the most perfect substitute for Alcoholic Drinks ever discovered, for either Summer or Winter.

BEWARE of mean and fraudulent imitations.

BEWARE of others copying our title.

MASON'S is the original and only genuine.

MASON'S is a Special Compound entirely from Herbs.

NO OTHER EXTRACT MAKES BEER LIKE IT.

Sold in Bottles at 6d., 1/-, & 2/- each, with directions.

MASON'S WINE ESSENCES

Make Temperance Wines in a few minutes.

Ginger, Orange, Lemon, Raspberry, Black Currant, &c.

These are having a very large sale now, and are extensively advertised.

Sold in Bottles, at 6d., 1s., and 2s. each.

Quotations on Application.

SOLE INVENTORS AND
MANUFACTURERS:

NEWBALL & MASON,
Manufacturing Chemists and Botanic Druggists, NOTTINGHAM.

ONE BY ONE!

PASCALL'S SILVER CACHOUS

BRILLIANTLY POLISHED.**FRAGRANT AROMA.****FINEST IN THE MARKET.**IN ROUND PATENT BOXES, MADE TO RELEASE ONE BY ONE.QUITE
NOVELPREFERRED
TO ALL
OTHERS.In 1 dozen
Outer
Boxes.Most
Saleable
2/3
per dozen.
In
1-lb. Bottles,
3/6
per lb.

Of the usual Wholesale Houses, and of the Manufacturer,

JAS. PASCALL, Blackfriars Rd., LONDON, S.E.

SEASONABLE ARTICLES.

LIME JUICE CORDIAL. LIME JUICE CORDIALETTE. Both these articles are popular summer beverages, and are put up in suitable bottles attractively finished off.

	CORDIAL.	CORDIALETTE.
Reputed Pints, per dozen ..	4/9	3/9
Quarts " " ..	8/6	6/6
Per Gallon " " ..	2/9	1/9

PURE WEST INDIA LIME JUICE (Filtered Bright).**GRANULAR EFFERVESCENT CITRATE OF MAGNESIA.** Per cwt., 70/- and 71/-.**EFFERVESCENT SUMMER SALINE.** Per cwt., 85/- 8-oz. bottles, 6/9; 16-oz. bottles, 12/- per dozen.**PERSIAN SHERBET** (Lemon Kali). Per cwt., 41/- and 45/-.*Prepared under the supervision of a duly qualified Analytical Chemist.***CHAS. SOUTHWELL & CO., Dockhead, LONDON, S.E.**

KREAT - HALVIVA

The New Substitute for Quinine.**REDUCES TEMPERATURE, SUPPRESSES INFLUENZA,
SEA-SICKNESS, &c. CURES INDIGESTION.**

One size only for Public use, for sale at 2s. 9d. a bottle.

One size only for Dispensing, 10-oz. Stoppered Flats.

SPARKLING HALVIVA for sale at 5s. a dozen.

HALVIVA COMPANY, 4 Temple Chambers, LONDON.

TO THE

CHEMISTS & DRUGGISTS

OF

GREAT BRITAIN.

TELEGRAPHIC ADDRESS:

COLEMAN,
GEORGE'S, NORWICH.St. George's, Middle St.,
NORWICH,
December, 1887.

The Excise Authorities having created a difficulty as to the sale of Medicated Wine containing a certain percentage of alcohol, we obtained in January last, from the Inland Revenue Authorities, permission to sell our WINCARNIS,* or Liebig's Extract of Meat and Malt Wine, **WITH QUININE**, without a Wine Licence, and many Chemists not holding a Wine Licence have sold considerable quantities. In order further to meet the requirements of the trade, we have introduced a Liebig's Extract of Meat and Malt Wine, **NON-Alcoholic**, made from the juice of the Grape, Liebig's Extract of Meat, and Extract of Malt. This also can be **SOLD WITHOUT A WINE LICENCE.** Your orders will oblige either direct or through the Wholesale Houses.

Yours obediently,

COLEMAN & CO., LIMITED.

*N.B.—The Wine is sold in Bottles, 2/9 and 4/6 each.
Trade prices on application.*

P.S.—Where the Magistrate's Certificate is not held we are willing to pay the **entire cost of a Retail Certificate** (the holder of which can sell any kind of Wines) if an **assorted order of 6 dozen** is sent us of any of our preparations—List on application. Our WINCARNIS,* or Liebig's Extract of Meat and Malt Wine **WITHOUT QUININE** commands a very large sale, and is recommended by over 2,000 medical men who have sent us testimonials in its favour.

SOLE MANUFACTURERS—

COLEMAN & CO., LIMITED,**ST. GEORGE'S, NORWICH,****AND 3 NEW LONDON STREET, LONDON, E.C.**

* WINCARNIS is a NEW NAME, registered to prevent fraudulent imitations.

EIGHT PRIZE MEDALS AWARDED.

GOODALL'S HOUSEHOLD SPECIALITIES.

YORKSHIRE RELISH.

Most Delicious Sauce in the World. Bottles, 6d., 1s., & 2s. each.

GOODALL'S BAKING POWDER.

The Best in the World. 1d. Packets; 6d., 1s., 2s., and 5s. Tins.

GOODALL'S EGG POWDER.

One 6d. Tin is equal to 25 eggs. In 1d. Packets; 6d., 1s., and 5s. Tins.

GOODALL'S CUSTARD POWDER.

Delicious Custards without Eggs. In Boxes, 2d., 6d., & 1s. each.

GOODALL'S BLANGMANGE POWDER

Delicious Blangmange in a Few Minutes. Boxes, 6d. and 1s. each.

GOODALL'S QUININE WINE, B.P.

Best Tonic yet Introduced. Bottles, 6d., 1s., and 2s. each.

GOODALL'S GINGER-BEER POWDER

Makes the Best Ginger-Beer. Packets, 3d. and 6d.

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For Painting Stoves, Grates, Iron, Tin, &c. 6d. & 1s. Bottles.

GOODALL'S LAVENDER WATER.

A Rich and Lasting Perfume. Bottles, 1s., 2s., and 5s. each.

GOODALL'S PLATE POWDER.

For Polishing and Cleaning all Metals. Boxes, 6d., 1s., and 2s.

GOODALL'S JELLY SQUARES.

Make a Delicious and Nutritious Jelly. In ½-pint, 1-pint, and Quart Boxes, 3d., 6d., and 1s. each.

PROPRIETORS—GOODALL, BACKHOUSE & CO., LEEDS.

PATENT MEDICINES

AND

DRUGGISTS' SUNDRIES.

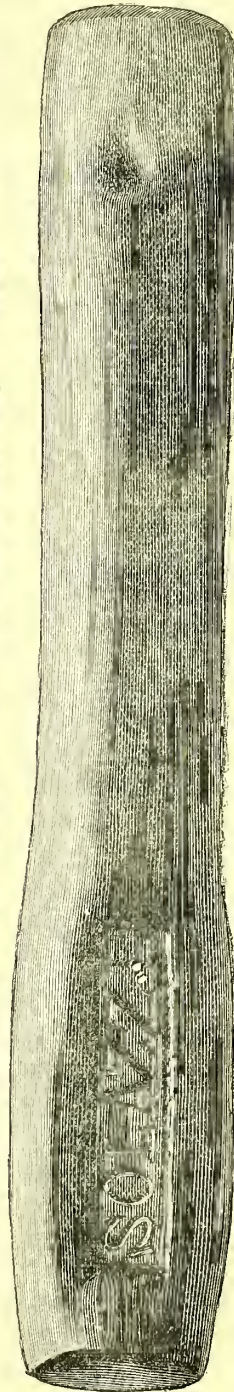
Monthly Price List of Patent Medicines, Druggists' Sundries, &c., will be sent post free on application to

GOODALL, BACKHOUSE & CO., LEEDS

ONE OF THE BEST SOOTHING AGENTS OR DEMULCENTS KNOWN.

PURE UNADULTERATED LIQUORICE

For COUGHS, COLDS, &c.



The SOLAZZI BRAND is certified by Analysis to be an ABSOLUTELY PURE EXTRACT, without any admixture. THE CHEMIST AND DRUGGIST says:—"The most esteemed of all." HEALTH says:—"By far the best and purest." TO BE OBTAINED OF ALL WHOLESALE HOUSES.

ARMBRECHT COCA WINE

ITS VIRTUES.

A powerful nerve stimulant. Restores the functions of the digestive organs, strengthens the mental and physical powers, assuages thirst, relieves nervous debility. Given with benefit in cases of opium and morphia habit.

THE ORIGINAL.—The leaves which we always employ are those of **Erythroxylon Coca**, Lamarck. We select them with the greatest care, and ensure by a thoroughly sound process of manufacture that Armbrecht Coca Wine is a true representation of the valuable properties of the drug.

THE FAVOURITE.—The composition of the "medium" wine, which has by far the largest sale of the six varieties, is *our secret*. We introduced this wine, at the suggestion of Dr. Spencer Wells, as a kind of compromise between Malaga, which was generally considered too sweet, and Burgundy, which found some objectors on the score of tartness of taste.

Please use this Order Form.

To Messrs. Armbrecht, Nelson & Co., Duke Street, Grosvenor Square, London, W.

Please send immediately on the receipt of this by _____

SPECIAL PRICE FOR GROSS LOTS.										WHOLESALE.			RETAIL PRICE.			£	s.	d.
...	...	Doz. Coca Wine	...	...	36/0	...	...	Imperial Pints	...	48/0 doz.							
...	...	" Coca Burgundy	...	...	36/0	...	...	"	...	48/0 "							
...	...	" Coca Malaga	...	...	36/0	...	...	"	...	48/0 "							
...	...	" Coca Port	...	...	36/0	...	...	"	...	48/0 "							
...	...	" Coca Sherry	...	...	36/0	...	...	"	...	48/0 "							
...	...	" Coca Champagne	...	...	46/6	...	...	Quarts	...	56/0 "							
...	...	" " "	...	...	26/6	...	...	Pints	...	33/0 "							
...	...	" Coca Wine Extract	...	...	31/6	...	...	Bottles	...	42/0 "							
...	...	" " "	...	...	49/6	...	...	"	...	66/0 "							
...	...	" Coca Lozenges	...	...	13/6	...	...	Box	...	18/0 "							
...	...	" " "	...	...	22/6	...	...	Tin	...	30/0 "							
PAMPHLETS FOR DISTRIBUTION—NO CHARGE.																		

IF ORDER BE SENT TO US DIRECT, and REMITTANCE ENCLOSED, we offer a discount of 2½ per cent. single dozen, not less; and 5 per cent. on 3-dozen lots, Carriage Paid England and Wales, and Half Scotland and Ireland.

Name _____

Address _____

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For firms in India, the British Colonies, and other parts abroad are executed at a substantial discount. Please order direct (giving references), or through London agents.

SOLE MANUFACTURERS—

ARMBRECHT, NELSON & CO.

Duke Street, Grosvenor Square, London.

WYETH'S BEEF JUICE.

A Liquid Preparation of the **CHOICEST BEEF**, containing the Nutritious Albuminous Principles in an unaltered and soluble form.

A Two-ounce Bottle
of Pure
Juice of Meat.

Actual test will show
3 per cent. by
weight of
ANHYDROUS
ALBUMINOIDS.

Contains the
Hæmoglobin of the
Meat unaltered.

Mix only with Iced or
Lukewarm Water;
Never with Boiling
Water, as
extreme heat renders
the valuable
Albuminous Elements
insoluble.

READ THE FOLLOWING

From

THE LANCET.

LONDON: SATURDAY, APRIL 30, 1892.

Analytical Records.

WYETH'S BEEF JUICE.

(JOHN WYETH AND BROTHER, PHILADELPHIA.)

"The following analytical notes and results testify unmistakably to the excellence of this preparation. It is a dark reddish-brown liquid of pleasant beef-like flavour, and free from objectionable preservatives. It contains not only the albuminous principles of beef in an active and soluble form, but in the condition in which they occur in the freshly expressed juice of beef itself. Viewed with the spectroscope a dilute solution is seen to give two absorption bands, characteristic of fresh blood or hæmoglobin. The liquid loses this property, however, as soon as it is boiled; while the coagulated albuminous principles assume a blood-red tint. According to our experiments no less than fourteen grains of solid albuminous principles in every fluid ounce are thus precipitated. The following figures gained in analysis will convey some idea of the eminent degree of concentration through which this preparation has been carried. Notwithstanding this, the vital elements of beef juice it contains have been preserved unchanged. Moisture, 44.87 per cent.; organic matter, 38.01 per cent.; mineral matter, 17.12 per cent. The organic materials contain 4.57 parts of nitrogen, and the mineral matter consists largely of common salt and, of course, soluble phosphate. Results like these make it safe to assert that as an example of preparations of this class Wyeth's beef juice is little short of perfection."

MANUFACTURED BY

JOHN WYETH & BROTHER

PHILADELPHIA, U.S.

LONDON—30 SNOW HILL, E.C.

Contains Albuminoids
in a higher degree
than any
other Preparation of a
similar nature.

Proportion of Nutrient
to Stimulating
Properties such that
it can be
retained by the
stomach in **EXTREME**
cases of Debility.

Being largely
Prescribed by the
Medical Faculty of
Great Britain,
every Chemist should
have some in Stock.

THE SALE
IS GUARANTEED.

Can be obtained from any Wholesale Druggists, or direct from any of the following Firms:—

Agents for Great Britain and France—**ROBERTS & CO.**, London and Paris.

Distributing Agents for Lancashire—**JAMES WOOLLEY, SONS & CO.**, Manchester.

Distributing Agents for Yorkshire—**GOODALL, BACKHOUSE & CO.**, Leeds.

Distributing Agents for Scotland—**RAIMES, CLARK & CO.**, Edinburgh.

MRS. WINSLOW'S SOOTHING SYRUP

FOR CHILDREN TEETHING,

Greatly facilitates the process of Teething, by softening the gums, reducing all inflammation; will allay ALL PAIN and spasmodic action, and is

SURE TO REGULATE THE BOWELS.

Depend upon it, Mothers, it will give rest to yourselves, and

RELIEF & HEALTH TO YOUR INFANTS.

Mrs. WINSLOW'S SOOTHING SYRUP

Has been used for over Fifty Years by Millions of Mothers for their children while teething with perfect success. It soothes the child, softens the gums, allays all pain, cures wind colic, and is the best remedy for diarrhoea.

Sold by Chemists and Druggists in every part of the world, 1s. 1½d. per bottle.

THE MEXICAN HAIR RENEWER.

Prevents the hair from falling off.

Restores Grey or White Hair to its ORIGINAL COLOUR.

Being delicately perfumed, it leaves no unpleasant odour.

Is NOT a dye, and therefore does not stain the skin, or even white linen.

Should be in every house where a HAIR RENEWER is needed.

OF ALL CHEMISTS AND DRUGGISTS. PRICE 3s. 6d.



NOTICE.

THE MEXICAN HAIR RENEWER may now be obtained in New York from the ANGLO-AMERICAN DRUG Co., 217 Fulton Street, and all Druggists.

FLORILINE

FOR THE TEETH AND BREATH.

Is the BEST LIQUID DENTIFRICE in the World.

Prevents the decay of the TEETH.

Renders the Teeth PEARLY WHITE.

Removes all traces of Tobacco-smoke.

Is perfectly harmless and delicious to the Taste.

Is partly composed of Honey, and extracts from sweet herbs and plants.

Of all Chemists and Druggists throughout the World.

2s. 6d. PER BOTTLE.

FLORILINE TOOTH POWDER only, in glass jars. Price 1s.

THE ANGLO-AMERICAN DRUG COMPANY, LIM.

33 FARRINGTON ROAD, LONDON, PROPRIETORS.

Pre=eminent

and WHY?

In the case of **Armour & Company's Digestive Ferments** evolution has performed its perfect work. The manufacture of Pepsin and Pancreatin logically belongs and must inevitably remain in the hands of a firm which slaughters annually 1,750,000 hogs, 750,000 cattle, and has the enterprise and capital necessary to equip a perfectly appointed laboratory, and engage the best chemical talent to manipulate the choicest portion of such stupendous stores of raw material.

Specialities of the Armour Laboratory.

PEPSIN 1-2,500.

Insoluble and Soluble Powders, Soluble Scales, Glycerole of Pepsin. Tablets, 3 grains each.

1.—POWDERED PEPSIN (*Non-Hygroscopic*).

For pills, powders, and other dry forms. An absolutely permanent Pepsin, free from all foreign odour and taste. Digestive power, 2,500 times its weight.

In 1-oz., 4-oz., and 8-oz. Bottles and 1-lb. Tins.

2.—SCALE PEPSIN & THE SAME POWDERED (*Soluble*).

Especially useful in preparing liquid forms. Soluble in water, and absolutely free from objectionable odour and taste.

With ordinary care is permanent, and retains its activity indefinitely.

Digestive power, 2,500 times its weight.

In 1-oz., 4-oz., and 8-oz. Bottles and 1-lb. Tins.

3.—GLYCEROLE PEPSIN (*Concentrated*).

A clear and permanent glycerin solution, 10 minims of which are the equivalent of 1 grain of our scale pepsin, possessing a digestive activity of 2,500.

This fluid pepsin is admirably adapted for use at the prescription-counter and in the pharmaceutical laboratory, in that it obviates the necessity of weighing and filtering when preparing liquid combinations.

Bottles of 16 fluid oz., and Jugs of 128 fluid oz.

Combines elegance of preparation with prompt and certain action.

ARMOUR'S GLYCEROLE PEPSIN is the ideal liquid Pepsin.

4—PURE PEPSIN TABLETS.

A convenient dosage form. Each Tablet contains 3 grains ARMOUR'S PURE NON-HYGROSCOPIC PEPSIN.

In Flat Bottles for Pocket, containing 20 and 75 Tablets.

Put up in Cases containing One Dozen Bottles.

PANCREATIN.

In Powder, and Tablets of Pancreatin, and Soda Bicarb. Glycerine Solution of Pancreatin.

1.—PURE PANCREATIN in Powder.

One of the purest Pancreatins of commerce. The peptonising power of the pancreatin ferments is here represented in powder.

In 1-oz. Bottles and 1-lb. Tins.

2.—GLYCEROLE OF PANCREATIN.

Ten minims equal 1 grain of Powdered Pancreatin.

In bottles of 16 fluid oz.; in jugs of 128 fluid oz.

3.—PEPTONISING TABLETS of Pure Pancreatin and Sodium Bicarbonate.

For peptonising milk and other foods for infants and invalids. Each Tablet contains $2\frac{1}{2}$ grains pure Pancreatin and 8 grains Sodium Bicarbonate.

These Tablets will be found uniformly reliable.

In Tubes containing 15 Tablets. Put up in Packages of One Dozen Tubes.

Recipes for pre-digesting foods are furnished with every bottle.

ARMOUR'S EXTRACT OF BEEF.

ARMOUR & Co. slaughter 750,000 head of cattle annually, which provide them with facilities unequalled by any other Manufacturer in the world.

ARMOUR'S PROCESS retains the True Natural Flavour of Fresh Beef, and its Stimulative and Nutritious Properties. It is guaranteed to be Pure Beef Essence, and invalids relish it when all other forms of nourishment nauseate. Gold Medals and Highest Awards at all Exhibitions. Adopted by H.M. and U.S. Governments, also for Hospital use. Packed in $\frac{1}{2}$, 1, 2, 4, 8, and 16 oz. jars.

Supplied in tins in limited quantities to our customers for compounding.

ARMOUR'S PREPARATIONS may be obtained through all Wholesale and Retail Houses, or direct from the Manufacturers.

General Offices and Laboratory,
CHICAGO, U.S.A.

ARMOUR & CO.

59 & 60 Tooley St., LONDON, S.E.

Telegraphic and Cable Address—"ARMORUM LONDON."

A. S. LLOYD'S EUXESIS,

FOR
SHAVING WITHOUT SOAP, BRUSH, OR WATER.

CAUTION.

The only Genuine has a yellow label printed ONLY in Black Ink, and bears the original address of the late inventor, "27 Glasshouse Street, Regent Street," the proprietors having purchased, under an administration suit, the Secret, Trade Mark, Goodwill, and Premises.

SOLE PROPRIETORS-

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WALKER, TROKE & CO.

WHOLESALE DRUGGISTS,

65 Bath Street, City Road,

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SOLE MAKERS OF

GABRIEL & TROKE'S

GELATINE CAPSULED

HORSEBALLS

Alterative, Condition, Cordial, Cough,
Diuretic, Fever, Physic, Worm, Quinine
Tonic Balls (Registered 81,291).

QUOTATIONS & SAMPLES FREE ON APPLICATION.



It is acknowledged by the Trade that THE "FLY CEMETERY"

Is the most saleable Fly Paper ever introduced. It is non-poisonous, and the enormous annual increase in the sale of it is positive proof of its popularity. Many Chemists sold more "Fly Cemeteries" last year than they ever did in their lives of all the other fly papers put together.

Samples, Testimonials, and Price on application to
TUNBRIDGE & WRIGHT, READING.



The Chemist and Druggist

SUPPLEMENT

Businesses Wanted.
Businesses for Disposal.
Premises to Let.
Auction Sales.

SATURDAY, AUGUST 20, 1892.

Partnerships.
Situations Vacant.
Situations Wanted.
Miscellaneous.

A Copy of this Supplement is inserted in every number issued of "The Chemist & Druggist."

PLEASE NOTE.

ADVERTISEMENTs for this Supplement must be received at the Office, 42 Cannon Street, E.C., not later than 5 o'clock on Thursday Evenings, for insertion in the current week's issue.

Advertisements must be prepaid. Remittances by post may be made in stamps, or by postal order made payable to "EDWARD HALSE," and crossed MARTIN'S BANK (LIMITED). To ensure prompt attention address all communications endorsed "Supplement," to The PUBLISHER of "THE CHEMIST AND DRUGGIST."

OFFICES: 42 CANNON STREET, LONDON, E.C.

CHEMISTS' TRANSFERS.

MESSRS. ORRIDGE & CO., 32 LUDGATE HILL, E.C.

CHEMISTS' TRANSFER AGENTS,

May be consulted at their Offices on matters of SALE, PURCHASE, and VALUATION.

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1.—LONDON, E.—Genuine Retail and Dispensing Business; vendor relinquishing business, having held it many years; returns £600 yearly, all good prices; handsomely-fitted shop, and well-selected stock; good house and garden; about £550 required, or valuation of stock and fixtures; portion of purchase-money can remain if wished.

2.—LONDON, S.E.—Prettily-fitted shop; good-class Retail and Dispensing, easy distance of the Crystal Palace; returns £450 yearly, easily increased; very good house and garden; about £450 required.

3.—LONDON (near Regent's Park).—Dispensing and Retail, good class; returns £800 yearly; very handsome shop, good stock; large house; price about £700. This business is worth the attention of anyone desirous of doing a pushing business.

4.—LONDON, N.—Retail and Dispensing Business, situate in a residential locality; returns between £500 and £550, all profitable business; handsomely-fitted shop and good house, with garden, held on good lease; price about £500; a fair offer will be entertained.

5.—LONDON, W.—Retail and Dispensing Business, established many years; returns over £600 yearly, with very good profits; Post Office attached pays rent; large double-fronted shop and large house, held on lease; price £500.

6.—LONDON (Suburb), S.E.—Retail and Dispensing Business, vendor going abroad; returns £400; profits very good; well-fitted shop and good house, held at low rental; vendor will accept value of stock and fixtures; the locality is being largely extended, and capital opening presents.

7.—LONDON, W.—Good-class Dispensing and General Retail; capital situate for a branch business from a good house; returns £600 to £625; the shop is handsomely fitted, situate at a corner; house large, with private entrance; price about £750.

8.—WEST OF ENGLAND.—Cathedral town.—The proprietor of a good-class business, returning £1,000 yearly, is prepared to introduce a purchaser for a year or two; proceeds to be equally divided during the introduction; purchaser must be prepared to invest £550 on entry and a similar amount at the end of introduction; references to be exchanged as preliminary to negotiation.

9.—KENT.—Unopposed business, situate in a pleasant locality; the business is very profitable and can be much extended; returns between £450 and £500; very good house and garden, very low rental; price to be arranged, about £500.

10.—FASHIONABLE TOWN (West).—Dispensing and Retail Business; returns at the rate of £600 yearly; handsome double-fronted corner shop, well stocked; good-sized house on long lease; price £535.

11.—HANTS.—Capital position in a very pretty rural district; old-established Business; returns about £600 yearly, with very excellent profit; very comfortable house, with attractive garden, greenhouse, stable, &c.; price about £520.

12.—EASTERN COUNTY.—Capital agricultural town; old-established Business; first-rate premises; returns £1,400 yearly, always increasing; the house is a good one; price required about £1,200; full particulars on application.

13.—BIRMINGHAM.—Retail and Dispensing Business; very good profitable concern; returns £700 yearly; several good proprietaries sell well; house contains 7 rooms with private entrance, yard attached; price about £480.

14.—WATERING PLACE (Season just commencing).—Vendor's health obliges him to relinquish; present returns about £450, but can be doubled by anyone equal to work; large shop, good fittings, well stocked, post-office attached; house contains 13 or 14 rooms with private entrance, can let off easily; price £500.

Particulars of any of the above will be furnished on application.

N.B.—NO CHARGE TO PURCHASERS.

Other Businesses, Town and Country.

Particulars free on application.

Personal applicants receive Messrs. O. & Co.'s direct attention and advice, where required, free.

TERMS FOR VALUATION ON APPLICATION. APPOINTMENTS BY POST OR WIRE HAVE IMMEDIATE ATTENTION.

Messrs. ORRIDGE & Co. invite communications from COLONIAL and FOREIGN firms where business of a confidential nature requires the special attention of a London Agent.

NOTICE.—Messrs. ORRIDGE & CO. have a large number of Businesses for Sale, suitable for Gentlemen with Small Capital. Full particulars on application.

ORRIDGE & CO., 32 Ludgate Hill, LONDON, E.C.

F. J. BRETT,**VALUER, LEICESTER,**

60 St. Stephen's Road.

References to principal London and Provincial Wholesale Houses, also to numerous clients throughout the United Kingdom.

BUSINESSES THOROUGHLY INVESTIGATED FOR BUYERS. 20 YEARS' EXPERIENCE**NO CHARGE TO BUYERS.****STOCKTAKING UNNECESSARY.**—Stocktaking is always dreaded by Chemists, and with a competent Valuer is not necessary.**F. J. BRETT** is prepared to estimate or to value entire stocks as they stand with little or no inconvenience to ordinary business, and has repeatedly done so with entire satisfaction to those adopting this mode.**STOCKS AND FIXTURES BOUGHT FOR CASH.****£1,400 returns.**—**YORKS.**—Rent £35; good general Retail and own preparations; agency (no trouble) nearly pays rent; goodwill £100, and valuation of stock and fixtures about £700.**£500 returns.**—**SUFFOLK.**—Very profitable Retail; fair house; rent and taxes £12; price £300.**£400 returns.**—**LONDON, S.E.**—Retail, Prescribing, and Dispensing; full prices; post-office worth about £100 per annum.**£1,900 returns.**—**WEST.**—Handsome Pharmacy, with Gilbey's agency; at valuation of stock and fixtures, about £1,400.**MESSRS. BERDOE & CO.****CHEMISTS' TRANSFER AGENTS & VALUERS,****30 JEWRY STREET, ALDGATE, E.C.****Established 1870.****VALUATIONS and TRANSFERS** conducted in any part of the United Kingdom. Over 20 years' practical experience.**NO CHARGE TO PURCHASERS.****1.—YORKSHIRE.**—Good-class Light Retail, Dispensing, and Prescribing Business; returns £1,000 under management; good house, low rent; shop well fitted and heavily stocked; price £750, or offer.**2.—KENT.**—Popular seaside resort; good-class Light Retail and Dispensing Business; returns £700; 5,000 prescriptions yearly; good house; changed hands once in 40 years; price £500.**3.—DERBYSHIRE.**—Light Retail, Dispensing, and Prescribing Business; returns £750; net profit £300; corner double-fronted shop, well fitted, and large stock; good house, side entrance; price £550.**4.—WARWICK.**—Unopposed Light Retail Business; returns £900, and making a clear income of £350 yearly; low rent; good house and garden; price £700; worth special attention.**5.—MIDLANDS.**—Good market town; Family Light Retail and Dispensing Business; large commanding shop, in centre of market-place; good house and garden; price £650, or valuation.**6.—READING (near).**—High-class Retail and Dispensing Business; no opposition; recently established and under management; will do £500 under principal; good house, garden; price £125.**7.—DERBY.**—Retail and Prescribing Business; returns £500 under management, capable of extension; good house; rent £30; no real opposition; price £325; worth attention.**8.—BATH.**—Old-established Light Retail and Dispensing Business; returns £600; net profit, nearly £250; 1,100 prescriptions yearly; low rent, good house; price £550, or offer.**9.—LONDON, W.**—Retail Dispensing and Prescribing Business; main thoroughfare; same hands 44 years; returns £500 to £600; good house and garden; price £200; part can remain.**10.—LONDON, N.**—Retail and Prescribing Business; returns £7 weekly, capable of increase under personal attention; good house and garden; price £250; part can remain.**11.—LONDON, S.W.**—Double-fronted shop (main road); populous suburb; returns £7 weekly, much neglected under management; good house; price £100; stock and fixtures worth £175.

Particulars of the above and others sent free on application.

Messrs. Berdoe & Co., 30 Jewry Street, Aldgate, E.C.**BUSINESSES FOR DISPOSAL.**

3s. 6d. for fifty words; 6d. for every 10 words beyond.

THE Chemist and Druggist's Business, 71 Grainger Street West, to be disposed of, with immediate possession; terms moderate. Apply. W. T. Allen, 14 Arcade, Newcastle-on-Tyne.**PRICE** £350 (part could remain).—A well-established Chemist's Business in the country, with a good connection; profits £200; returns about £650; could be largely extended. "Executrix," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.**A** MIXED Business, with good general working stock; present returns from £400 to £500, capable of being doubled by a qualified man; populous district, situated in Leeds; price £250, or valuation. Particulars from F. W. Graham, 51 Northall Street, Leeds.**I**N one of the leading towns in the West of England.—A first-class Light Retail, Prescribing Business, with Wines and Spirits; returns have averaged £1,900 for last 3 years; handsomely fitted; good stock; large house; valuation only. Address, N. M., 62 Crescent Road, Reading.**Messrs. CROCKER & CO.****Trade Valuers, Transfer Agents, and Accountants,****15 WALBROOK, E.C.,**

Have at the present time a large number of inquiries for good-class Country Businesses, and they invite communications from intending vendors. **NO CHARGE IS MADE UNLESS A SALE IS EFFECTED**, and particulars of businesses are given to those only having the required amount of capital to invest, thus guaranteeing only *bona-fide* inquiries and obviating publicity. **VALUATIONS MADE FOR PROBATE OR TRANSFER, BOOKS AUDITED AND BALANCE-SHEETS PREPARED IN ANY PART OF THE UNITED KINGDOM.** Having had many years' practical experience in the Wholesale and Retail Drug Trade, C. & Co. can offer valuable assistance and advice in the conduct of such matters. References permitted to past and present Clients, also to the Leading Wholesale Houses in the Trade.

SOMERSET.—Old-established Business in fashionable watering-place, giving a net profit of £350 a year; price £400.**MIDLANDS.**—Good-class Country Retail and Dispensing; returns £1,500; net profit £400; price £500.**BUCKS.**—Rapidly-increasing Retail and Dispensing; returns £550; price £400; good house and garden.**LONDON, W.**—Good-class Retail and Dispensing; returns £1,000; price £800; handsome pharmacy; valuable lease; good house.**ON THE BANKS OF THE THAMES.**—Old-established Retail and Dispensing; returns £800; price £750; scope for increase.**SEASIDE.**—Good-class Retail and Dispensing trade; returns £600; plenty of scope for increase; price £400; large and convenient house.**LONDON, N.**—Unopposed position; good-class Retail, Dispensing, and Prescribing; returns £700; exceptionally handsome pharmacy and good house; price £500.**HOME COUNTY.**—30 miles out.—Good-class Country Business; returns £800; profits £300 after paying all expenses; price £700.**LONDON, S.E. (Suburb).**—Near Crystal Palace; Light Retail and Dispensing; returns £500; price £400; very handsome pharmacy.**DEVONSHIRE.**—Country Retail, unopposed; returns £550; rent £16; price £350.**LANCASHIRE.**—Unopposed Country Retail and Dispensing; a little heavy; returns £700; rent £20; price £350; net profit £270.**NO CHARGE TO PURCHASERS.****VALUATIONS A SPECIALITY. TERMS ON APPLICATION****BUSINESSES FOR DISPOSAL—Continued****I**MEDIATELY, under exceptional circumstances, Retail, Dispensing and Prescribing Businesses, in good-class London suburb; handsome shop, well stocked and fitted; good house and garden; improving neighbourhood; fullest investigation invited; price £200. B., Dingleside, Drummond Road, Bournemouth.**SEASIDE** Resort.—For Disposal, facing the sea, a Retail and Dispensing Business, capable of great increase; corner shop; season began; suitable for a pushing man; price £400; good opening for Dentistry. Address, "Statin," c/o Messrs. Hearon & Co., 38 Southwark Street, London, S.E.**YORKSHIRE.**—Market town; old-established Light Retail and Prescribing Business; owner retiring through old age; a fair trade is now being done, but in younger hands it could be easily doubled; only valuation wanted, £150 to £200. "Yorks," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.**F**OR Sale, a Chemist's Business, very suitable for an energetic man; plenty of work; established 21 years; taking from £12 to £14 per week; proprietor resigning; good prescribing trade; price £430, worth £630; good profitable trade. Apply, 123/3, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.**H**OME COUNTY.—Light Retail and Dispensing Business, in a small country town; returns £750, excellent profits; low rent; long lease; good house; price £600, or offer; books open for inspection, and every investigation courted. "Aloe," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.**F**ARSLEY, near Leeds.—An unopposed Business, established 12 years, in a district of 6,000 inhabitants, and the net profit of which is £180 a year may be easily much increased, may be had at valuation, about £220, or good substantial offer. Address, Thos. Tomlinson & Son, Chemists' Valuers, 9 New Cannon Street, Manchester.**T**HOMAS TOMLINSON & SON, Chemists' Valuers, 9 New Cannon Street, Manchester, have about 30 Businesses for disposal, principally in the Midland and North Counties. Send particulars of class required and capital at command; conscientious opinion, from large experience, may be relied on.**N**O OPPOSITION.—Old-established Business (South Wales) to be given away to an immediate purchaser for £95; mahogany-fitted shop, in splendid condition; £400 a year can be done; mixed trade, good Prescribing; nice house, garden, and cellar; low rent. "Iridis," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

BUSINESSES FOR DISPOSAL—Continued.

LONDON (suburb), S.E. — For immediate disposal, recently established Retail and Dispensing Business; main thoroughfare; present returns nearly £10 weekly, and increasing; good profits; increasing locality; price £350, £250 cash, remainder by instalments. 130/3, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

£200.—SURREY.—In a good-class and rapidly-increasing locality; handsome double-fronted shop, well fitted, and good working stock; very pleasant house and garden; returns about £7 weekly, with excellent prospects for the future; stock, fixtures, worth price asked. 46 St. James' Grove, Peckham, London, S.E.

£3,000 returns (over), General, Mixed, Retail, Wholesale and Petroleum; in consequence of serious illness must be sold at once; good house, garden, &c., in desirable locality, within one hour of London; rent £40; stock and fixtures at valuation, £700 to £800, part can remain. F. J. Brett, Valuer, 60 St. Stephen's Road, Leicester.

DEATH VACANCY.—Near Epping Forest; a light Retail, Dispensing, and Prescribing Business; present returns under management £12 weekly; very low rent on long lease; handsomely fitted shop, well stocked; unopposed locality; price about £450. Further particulars, address "Exors," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

STAFFORDSHIRE.—For immediate sale, in a thickly-populated locality, Light Retail and Prescribing Business; returns £12 weekly, half profit; well situated, good position, main thoroughfare; price £400, about value of stock and fixtures; every investigation allowed. T. D. R., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

BIRMINGHAM Suburbs; thickly populated; a genuine Prescribing and Light Retail, returning over £500, and increasing; considerable Proprietaries; no patents; exceptionally good house and shop; price £300. This Business is a thoroughly profitable concern; at present has only partial attention, hence great scope for much increase. "Prescriber," Wyleys, Coventry.

£300.—Retail and Prescribing Business, with Medicine-herb trade, in good main road at Poplar; returns about £700, good profits; shop is well fitted and stocked; good house, low rent, on lease; selling through illness; price £300; only requires seeing. Address, "Poplar," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

GENUINE Retail Drug Business for sale; established 20 years ago by present proprietor, who is retiring from retail; long lease, as lock-up shop, or with house; 10 minutes from London Bridge, Surrey side; thickly populated; very brisk ready-money drug trade, with two or three good proprietary lines. Address, "Practical Chemist," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

OLDHAM.—A good Chemist's Business, which may be much increased, as present owner is not registered; will be sold at valuation, about £350, or good offer, as he is from particular reasons intending to give it up by end of September; the profits from P.O., after paying for management, pay rent and taxes. Apply, Thomas Tomlinson & Son, 9 New Cannon Street, Manchester.

BRISTOL.—Ready-money Light Retail and Prescribing; doing £13 10s. weekly, energetic man could easily double returns; reluctantly selling owing to ill-health; splendid 10-roomed house, which could be let off if desired; rent £40; handsomely-fitted double-fronted shop; good sale for own proprietaries at large profits; no opposition; no oils, colours, drysalts, or any heavy trade; fortune to a good Prescriber; densely populated neighbourhood, main thoroughfare; large sale for horse and cattle medicines at splendid profits; no cutting, good price for patents; price £400; no agents. Address, "Chemist," 135 Lawrence Hill, Bristol.

BUSINESSES WANTED.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

WANTED, a Chemist's Business, returning about £800 yearly; a Country or Agricultural one not objected to. "Brixton," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

AN improving Suburban or Country Business, with good prospects, in a healthy locality within easy distance of London; comfortable house essential. Particulars, in confidence, 131/6, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WANTED, good Business in small town or large village; must be healthy locality, with good premises and garden preferred; none but genuine offers required, and must bear strict investigation. Address, "Magnesia," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WANTED, a thoroughly genuine Business (with good house and garden preferred), yielding about £200 to £300 after paying rent, rates, and all working expenses; part purchase-money to remain for short time; state all particulars, to save needless correspondence. Address, "Rhei," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

SALE BY AUCTION.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

SOUTHAMPTON.—To Chemists and Druggists.—No. 24 St. Mary's Street, the best ready-money thoroughfare in the town; the Lease of the Premises, and the whole of the Stock-in-Trade and Fixtures, will be sold by Auction in one lot (unless previously sold privately), on Wednesday, August 31st, by Perkins & Sons. Particulars and orders to view may be had of the Auctioneers, Southampton.

FOR SALE.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

BARGAIN.—Neatly-fitted shop; satisfactory reasons for immediate disposal; worth seeing. Apply, 10 Shrewsbury Road, Westbourne Park.

APPRENTICESHIPS.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

A GENTLEMANLY youth, about 16 or 17, wanted, as Apprentice to a Dispensing and Retail Chemist; an excellent opportunity of learning the business in all its branches; with Preliminary examination passed preferred; premium required; comfortable home. For particulars, apply Hall, 509 Fulham Road, S.W.

APPRENTICE wanted; also Junior or Improver, in good-class business, for well-educated youth, if passed Preliminary preferred; every opportunity of learning his business; good home; time for study, recreation, &c.; moderate premium required with apprentice; reference to former pupils. Address, "Sozodent," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

SITUATIONS OPEN.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

JUNIOR wanted for Light Retail and Dispensing. Full particulars to Ferriday, Chemist, Oakengates.

QUALIFIED Assistant, about 23, wanted for a fortnight. Apply, W. L. Clarke, Forest Hill, S.E.

WANTED, qualified Assistant; outdoors; about 25; permanency to a good man. Gibson, Burton-on-Trent.

IMPROVER or Junior, at once; youth just out of his apprenticeship. Apply to Vines & Froom, 75 Aldersgate Street, London.

WANTED, good Junior Assistant; careful and quick; indoors; hours light; no Sunday duty. J. Scott, Chemist, Bodmin.

AN experienced Man for the warehouse, married, without family, to reside on the works. Apply, "Drugs," 42 Cannon Street, E.C.

WANTED, immediately, a good Junior Assistant as Junior Dispenser. Apply, with full particulars, to Savage & Co., Chemists, Brighton.

WANTED, Junior or Improver, for Light Retail and Dispensing. Apply, with full particulars, to Davies, Pharm. Chemist, March, Cambs.

WANTED, a Junior Assistant; outdoors. Apply, giving full particulars, to D. P. Roberts, Drug and Chemical Store, North End Croydon.

WANTED, for September, qualified Assistant; one used to Stores preferred; outdoors. Apply, Goodall's Drug Co., High Street, Mexboro'.

ASSISTANT (indoors) at once. Apply (enclosing photo, returned), stating salary and full particulars, "Chemist," 7 Worcester Street, Wolverhampton.

J. WOOLLEY, SONS & CO., Manchester, require a qualified Junior Assistant (outdoors). Apply, by letter, giving the usual particulars.

AS Improver or Junior Assistant.—O. J. L. Russell, Pharmaceutical Chemist, Windsor, requires a gentlemanly, well educated, and steady young man.

SITUATIONS OPEN—Continued.

PACKER.—Wanted, an energetic, smart man, accustomed to export packing; first-rate character indispensable. Apply to F., c/o Housekeeper, 36 Mark Lane, E.C.

LOCUM-TENENS wanted for a fortnight early in September; must be qualified; hours short; call or write. K. L., c/o Messrs. Davy, Yates & Co., 64 Park Street, Southwark.

WANTED, Junior Assistant for Laboratory. Apply, stating age, experience, terms, with references, &c., to "Tincture," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

IMPROVER or Junior, for Mixed Country business. Apply with usual particulars, stating salary required and enclosing photo, to Arthur Carlton, Chemist and Druggist, Peterborough.

JUNIOR, at once, in a light business; time for study; abstainer preferred. Apply, stating age, salary, experience, &c., and enclosing photo (to be returned), to Frowd, Chemist, Portishead.

WANTED, a steady obliging man as Manager for a Mixed Country trade, with Horse and Gas free (unfurnished), or with a view to purchase. Address, "Nemo," Woolley & Co., Manchester.

BOURNEMOUTH.—Qualified Assistant wanted, to manage Branch. State age, height, salary required, and enclose photo, with stamped envelope. Address, Gilbert & Hall, Chemists, Bournemouth.

BY September 1.—Wanted, an Assistant; state age, height, salary required, and full particulars; plenty of time for study. Apply, by letter only, Fred Walker, 11 Cambridge Street, Victoria, S.W.

WANTED, an active, industrious Junior Assistant in a good-class Country Retail and Dispensing business; outdoors. Apply, with full particulars, to Hurst & Son, Pharmaceutical Chemists, Louth.

WANTED, Junior Assistant or Improver; able to Extract. Apply, stating salary required (outdoors) and usual particulars, to "Midlands," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

AGENT wanted, thoroughly acquainted with the Export Trade in Acetic Acids, 80% and 100% (Glacial), in bottles, to China, Japan, and India. Apply, by letter, to A 3094, care of Rudolf Mosse, Cologne, Germany.

WANTED, at once, an Assistant, well up in business; comfortable home; references must be good; liberal salary. Enclose carte (to be returned) and particulars to Hopper, Chemist, 319 Romford Road, Forest Gate.

GENTLEMANLY Assistant, at once; well up in Dispensing and first-class business; competent to take entire charge. State age, salary required, with references (outdoors), to J. H. Hackett, 29 Christ Church Road, Oxton, Birkenhead.

LIBERAL commission given to Travellers for selling a novel Toilet Almanack for 1893; sells well; suitable for all trades; this is worth the attention of pushing men. Full particulars from Fieldsend, New Southgate, London, N.

WANTED, about the end of August, Manager for Branch; permanency; good references indispensable. Apply, stating salary required and other particulars, and enclosing carte (to be returned) to E. Lovely, Chemist, Beckenham.

WANTED, first week in September, two active Juniors (indoors) in a first-class Dispensing and Mixed Country business; hours easy; comfortable home. Apply, with usual full particulars of experience, &c., Dixon, Chemist, East Grinstead.

TEMPORARY; qualified Assistant to take charge during absence; about 1 month; abstainer preferred; aged not under 25. Apply, giving references, salary, and stating when disengaged, to J. Noble, Chemist, Boscombe, Bournemouth.

WANTED, a Minor Assistant at once; aged about 22 to 30; must be quick and obliging to customers; one used to store trade preferred. Give fullest particulars, salary &c., and enclose photo (to be returned), to D. C. H., c/o Raimes & Co., Wholesale Druggists, York.

WANTED, at once, a good Junior, till the end of September or longer, at a seaside resort on East Coast. Apply, with full particulars and salary required, to "Coast," c/o Messrs. Smith & Sons, Magdalen Street, Norwich. Also an Apprentice; premium moderate.

IMMEDIATELY (for Ostend).—M. A. de Coek, Pharmacie Centrale, 16 Rue des Sœurs Blanches, Ostend, is in immediate want of an Assistant, with a knowledge of English and German, and (preferably) with some acquaintance with French; send photo. Address as above.

ASSISTANT; abstainer; indoors; at once; aged not under 20; hours 8 till 10, and alternate Sunday evenings; no time can be spared except the usual afternoon weekly. Apply personally, or enclosing carte, to Mr. Taplin, 91 Hampstead Road, London, N.W. One only kept.

WHOLESALE.—Young Man with experience of Dry Counter wanted. Apply, Messrs. Corbyn, Stacey & Co., 300 High Holborn.

WANTED Young Man as Porter in Drug warehouse, and to assist in small Wholesale. Apply, stating age, salary required, to Fletcher, Chemist, Ilkeston.

A QUALIFIED Assistant, to take charge of a Branch shop, wanted at once. State age, salary, and full particulars (personal interview preferred), J. S. Simcock, 311 Goswell Road, E.C.

A QUALIFIED Assistant wanted for Light Retail and Dispensing; an hour a day, and whole evening a week; good salary, and comfortable home; will suit a reliable man requiring a permanent situation. Apply, personally preferred, to J. Richardson, 155 Praed Street, Hyde Park, W.

WANTED, early in September, a qualified Assistant for a Country Business; aged about 24; indoors; hours very short; no Sunday duty. State particulars and salary required, enclosing photo, to G. H. Morgan, Chemist, Wem, Salop. Applications not replied to in 3 days declined.

CHEMIST'S Assistant.—Wanted, for South Africa, a competent man, 22 to 24 years of age, well up in Dispensing and not afraid of work; total abstainer preferred; engagement for 3 years. Write, with full particulars, to "Cape Town," c/o H. B. Sleeman, 84 Leadenhall Street, E.C.

WANTED, a fully-qualified Assistant, to take charge of the Dispensing Department of a General Stores business in a large Scotch town. Applications, with full references, and stating salary desired, to be addressed No. 96/34, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

QUALIFIED Assistant, about 25, to take charge of suburban Branch, wanted second week in September, pushing and energetic; Extractor preferred; state salary (indoors), experience, and usual particulars. Also vacancy for Junior or Improver. Apply, W. E. Callum, 193 Borough High Street, S.E.

IN SEPTEMBER; part time; gentlemanly Junior or Improver for Light Suburban Retail and Dispensing business; indoors, with time for study, &c.; must have had experience in Dispensing. Full particulars, with carte, to W. Arthur Sherer, Pharmaceutical Chemist, 69 Churchfield Road, Acton, W.

TRUSTWORTHY, energetic Assistant; aged about 24; used to Country and Agricultural trade; qualification not necessary; must be quick and active; short hours; no Sunday duty; salary £50; comfortable indoor berth; required September 5. Usual particulars, Keeble, Chemist, Thame, Oxon.

WANTED, qualified man; Minor sufficient; must be able to Extract Teeth and fully qualified to take charge of Dispensing Counter and sale of poisons, with manufacture of tinctures, &c., &c. Apply, with testimonials (no copies), "Zither," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

IMPROVER, Junior, or Turnover Apprentice, with country experience, wanted; one used to Mixed trade not objected to; good home, short hours; time each day for study or recreation, half-day, each week; liberal terms to energetic, pushing man. Apply, with full particulars, to "Chemist," 148 High Street, Chatham.

WANTED, at once, qualified Locum-tenens for 3 weeks; steady, good Counterman, reliable Prescriber; business chiefly Prescribing and Retail; wages 35s. weekly, indoors; as advertiser is going away for a fortnight August 26th or 27th, reply to this advertisement by wire, with references, is requested. Charles Knight, Chemist, Portsmouth.

INVOICE Clerk wanted in Wholesale Sundries and Patent Medicine Warehouse; must be good writer, quick and correct at figuring, and have had experience in invoicing Sundries and Patents; wages 25s. to 30s. weekly, according to ability. Write fully, stating age, previous experience, &c., to 96/21, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WANTED, a fully-qualified Chemist and Druggist, capable of opening and Managing a Business under a surgeon. To an energetic young man this would be a splendid situation; wages 35s. weekly, with a commission on profits; the neighbourhood is pleasantly situated, with plenty of scope for ability. Apply, "Olive," Burditt & Wimpenny, Exchange Buildings, Huddersfield.

IMMEDIATELY; smart outdoor Assistant (qualified), of good address, seeking permanency, for Retail Branch (or main establishment, as necessary); must be well recommended as being industrious, obliging, and trustworthy. Tooth-extractor, Prescriber, and pushing Salesman required. State age, height, experience, salary, &c. (enclosing photo and references), to "Redcross Pharmacy," 73 Freeman Street, Grimsby. Also outdoor Apprentice; no premium required.

HARROD'S Stores (Limited), 101, &c., Brompton Road, S.W., require the services of a thoroughly competent man to prepare and superintend the putting-up of Specialties, Toilet Preparations, &c., on a large scale; applicants must be thoroughly up in this branch of the business, and also conversant with the making of the B.P. Tinctures, &c., &c.; hours 8 to 7, Saturdays 9; no Sunday or Bank Holiday duty; outdoors; salary commencing at £2 per week. Apply, personally if possible, to the Chemist, at above address.

H. P. TRUEFITT'S SPECIALITIES FOR THE HAIR.

Floral Extract, 3/6 5/-,
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Egg Julep, 2/-, 4/-
CONCENTRATED

Egg Julep, 2/6,
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Golden Fluid,
10/6, 21/-

EUXURON,
1/6.
&c.

Stimulating Lotion, 5/-,
10/6.

Asilagent and Tonic
Lotion, 5/-, 10/6.

Quinine and Arnica
Hair Wash, 3/6,
5/-, 10/6, 21/-

Arnica Wash,
3/6, 5/-,
10/6.
&c.

EUCHRISMA.
Combines in one clear fluid every valuable
ingredient both of a Hair Grease and Wash,
3/6, 1/-, 10/6, 2/-.

EAU RACINE.
For renewing the original colour of Gray Hair,
is sold in its Compound. Price 6/-.

An elegant Preparation for
the Hair and Beard.
Price 2/6, 3/6, 5/-, 10/6, 21/-.

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20 & 21 Burlington Arcade; 13 & 14 Old Bond St., London.

THE NEW PATENT HOLD-STOPPER SMELLING BOTTLE



Exact Size.

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fixed so that they can-
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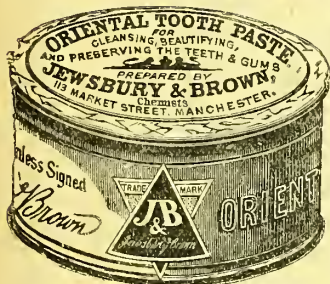
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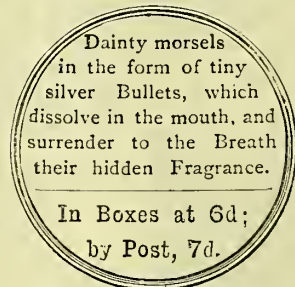
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TIME IS MONEY!

"LOST.—Yesterday, somewhere between sunrise and sunset, two golden hours, each set with sixty diamond minutes, No reward offered, for they are gone for ever."

It is not that we are all money-grabbers, gold-diggers, worshippers of Mammon, apostles of Croesus, monopolists, landlords, and the rest, that the old saw runs—Time is Money. No, indeed! It is because of the uncertainty of worldly affairs and the lack of provision for the old who is poor, that everyone feels he must make hay while the sun shines—work while it is day and before the evening comes—or, in plain English, improve his time. The possibility of an impecunious old age is within the horizon of all, so it behoves the provident to lay by something for a rainy day. Money is the direct or indirect representative or equivalent of work done, and, as any considerable amount of work requires time for its performance, we say—Time is Money. How many of the readers of this overvalue money and undervalue their time! Golden opportunities lie about most of us—opportunities which do not, like the apples of old, recede if we reach out our hands prudently to pluck them. The trouble is that we don't take trouble enough to "get on." It is said that someone asked Sir Isaac Newton how he discovered the law of gravitation, and that his answer was, By thinking about it.

Well, we all require to think and work a little more and doze a little less. We are all somnambulistically inclined, and we are told that "drowsiness shall clothe a man with rags." We have seen men of transcendent genius clad in rags, and we believe that some of the richest men the world has ever reared—richest in the possession of priceless mental and moral gifts—men "of whom the world was not worthy"—have known what it was to beg for bread. Wrote Otway (?)—we quote from memory—

"I have known the luscious fruits of plenty,
Every night have slept with soft content about my head,
And never waked but to a glorious morning;
Yet now must fall like a full ear of corn
Whose blossom 'scap'd, but withered in the ripening."

"My poverty, not my will, consents," said an old Shakespearian scholar over his crust once to the writer when a boy; but he was no genius, and it is not an indication that a man is a peripatetic philosopher because he happens to be unsuccessful in the race for bread. It is no indication of common sense even to omit to take advantage of every opportunity which will enable one to provide for the future. "Go to the ant; consider her ways and be wise; which having no guide, overseer, or ruler, provideth her meat in summer, and gathereth her food in the harvest." "Instead of waiting and wishing for a rich *uncle* to die, go and see how a rich *ant* lives."

A large proportion of our friends consists of two classes—one with little businesses and few failures, and the other with large businesses and many failures. The former are the less active, and the latter perhaps the less prudent. Enterprise is the watchword of the hour, and without it man rides a rocking-horse; but enterprise should be tempered with prudence. Why have you not more trade? we ask the one; but, Why do you not make a better profit? we ask the other. Let us look at things in a practical way. Friend No. 1.—You know soap is an article used by well-to-do people every day. Are you doing a good business in soaps? If not, somebody else is. Every day you should sell some soap, and if you availed yourself of our co-operation we would soon start things moving in the right direction, for we supply plenty of "Vinolia" Soap, and if you do not sell it somebody else does, and profits ought to be just as good in your pocket as in your neighbour's. Friend No. 2.—Why is that balance-sheet so unsatisfactory—why is it you sleep so poorly o' nights? "Cutting," bad profits, bad debts! Ah! that's it. Mark that road! It has an iron gate at the foot, and that gate swings on oiled hinges and opens into an open court called bankruptcy. How are you going to keep out of it? Stop right where you are! What goods do you handle without a fair living profit? Several? Very well—shovel them back on the manufacturer who sold them to you. What goods have you that there is next to no sale for? Several? Then stir up the makers, and get rid of them by hook or crook, and without delay. Don't lock up time and capital with "drugs in the market." The bad debts—look more carefully into your customers' capacity to pay, and collect sharper. Now then, see that your shop shines with the popular and profitable. Always make a point of being in touch with the most successful. Luck travels the way they are going. A tablet of Premier "Vinolia" Soap sold at our minimum cutting price (3½d) yields ¾d. profit, and a box sold every day would keep a man from starving. Think of it—a box of each of our soaps and of "Vinolia" Cream and Powder sold every day yields a profit of £1 a week, or £52 per annum. Take time by the forelock. Interest yourself in what pays. If you are in business for the honour of it, go to Parliament. If for a living, make a success of it. Lose not another day.

"It will not last for ever,
Still ebbing from our gaze:
The tide of time will never
Bring back these golden days."

Time is money. Communicate with us.

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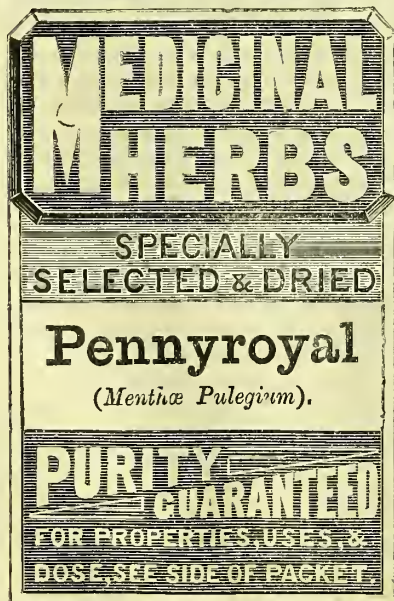
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Orme & Co.

EMBRICATION

Burn, H.
Day & Sons
Elliman, Sons & Co.

ENEMAS

Evans, Sone & Co.
Sanger & Son
Scriven, G.
Warne & Co.

ENGRAVERS

Barker, W., & Son
Corean, J. R.

ESSENCES

Bockett, W. | Berger, F.
Boehm, F.
Boulton, J., & Co.
Brady & Hinchliffs (Lim.)
Burgoyne, Burdighes & Co.
Bush, W. J., & Co.
De Carle & Son
Fletcher, Fletcher & Stevenson
Goodall, Backhouse & Co.
Hay, W.
Idrie & Co.
Lambert, Samuel, & Co.
May & Baker (Lim.)
Meadowcroft & Son
Newball & Macon
Oldfield, Pattinson & Co.
Stevenson & Howell
Tyler, P. (Anchovies)
Tyler, T., & Co.
Woolley, Sons & Co.

ESSENTIAL OILS

Berger, F.
Boehm, F.
Bush, W. J., & Co.
Clay, Rod & Co.
Cooking & Co. (Japan Peppermints)
Dodge & Cleoit
Evans, Sone & Co.
Hodgkinson, Treacher & Clarke
Lewis, M.
May & Baker (Lim.)
Meadowcroft & Son
rompelguter, W.
Robert Freres
Sozio & Andrioli
Schlesinger, L.
Stevenson & Howell
Eymes & Co.
Tombarel Freres
Treat, R. C.
Vogt, G., & Co.
Warrick Bros.
Wright, Layman & Umney

ETHER

Duncan, Flockhart & Co.
Howards & Sone
May & Baker (Lim.)
Robbins, J., & Co.
Tyler, T., & Co.
White, A., & Sons
Woolley, Sons & Co.
Wright, Layman & Umney

EUCALYPTUS

Dowrie B. I. F. Co.
Dunlop, W. & Co.
Evans, Lescher, & Webb
Fletcher, Fletcher & Stevenson
Tasmanian Eucalyptus Oil
Vogt U., & Co.

EXTRACT MEAT

Brano & Co.
Bush's Liquid Beef
Donaeyer's Peppone and Extract of Meat Co. (Lim.)
Idrie & Co. (Viking Co.)
Liebig Co.
Liquor Carnie Co. (Lim.)
Mason, G., & Co. (Lim.)
Wyeth, J., & Brother

EXTRACTS, FLUID

Allen & Hanbury
Anderson & Co.
Barber, G., & Co.
Burgoyne, Burdighes & Co.
Evans, Sone & Co.
Fletcher, Fletcher & Stevenson
Hooper, E., & Co.
Lloyd, T. Howard & Co.
Moes & Co.
Potter & Clarke
Vogt, G., & Co.
Wright, Layman & Umney

FEEDING BOTTLES

Burroughs, Wellcome & Co. (Thermo Safe)
Evans, Sone & Co.
Hearn, E. A., & Co.
Hockin, Wilson & Co.
Kliner Bros.
Lynch & Co.
Marriott, E., & Co.
May, Roberts & Co.
Maw, S. Son & Thompson

FILTERING

Berchfield Filter Co.
Fordham, W. B., & Sons (Ld.)
Mawson, Swan & Weddell
Silicated Carbon Filter Co.

FLESH GLOVES

Pattison, G.

FLY PAPERS

Ford, Shapland & Co.
Mather, W.
Maw, S., Son, & Thompson
Turnbridge & Wright
Wilson, S.

FOOD (Infants' & Invalids')

Allen & Hanbury
Benger's Food
Bovril
Brand & Co.
Evans, Sone & Co.
Goodall, Backhouse & Co.
Hearon, Squire & Francis
Ivins & Co.
King, F., & Co. (Lim.)
Liebig Co.
Liquor Carnie Co. (Lim.)
Nestle, H.

FORMULA

Brooks, T.

FRUIT JUICES

De Carle & Son

GINGER ALE

Millis, M. M., & Co.

GLYCERINE

Blyton Astley & Co. (Pastilles)
Boehm, F. | Fink & Co.
Fuerst Bros.
Greiff, R. W., & Co.
Lynch & Co.
Price's Candle Co.
Taylor, A. J., & Co.
GRANULAR PREP.
Evans, Sone & Co.
Hearon, Squire & Francis
Lloyd, T. H., & Co.
Wright, Layman & Umney

GRIPPE WATER

Woodward, W.

GUM

Fink & Co. (Arabic, &c.)
Greiff, R. W., & Co.
Levermore, Aug., & Co.
Taylor, A. J., & Co.

HAIR PREP.

Anglo-American Drug Co. (Lim.)
Cheesebrough Mfg. Co.
Edwards & Wals
Trueitt, H. P. (Lim.)

HERBALISTS

Newball & Macon
Potter & Clarke

HERB BEER BITS

Newball & Macon
Oldfield, Pattinson & Co.
Potter & Clarke

HOMOEOPATHIC

Keene & Ashwell
Leath & Sone
Thompson & Capper
Watson & Wals

HYPOPHOSPHITES

Duncan, Flockhart & Co.
Fellows
Fletcher, Fletcher & Co.
Symes & Co.

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Symes & Co.

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Duncan, Flockhart & Co.
Fellows
Fletcher, Fletcher & Co.
Symes & Co.

MALTEXTRACT, &c.

Allen & Hanbury
Anderson & Co.
Burroughs, Wellcome & Co.
(Kepel)
Hearon, Squire & Francis
Baimes & Co.
Richardson, John, & Co. (Leicester), Lim.
Wyley & Co.

MANICURE PREP.

Dr. Paul's

MARFING INKS

Barber, G., & Co. (Crimson)
Bond, John (Crystal Palace)
(Ink and Pencils)
Perry & Co. (cancu)

MEDICINE CHESTS

Burroughs, Wellcome & Co.
Day, Son & Hewitt (Veterinary)
Day & Sone (Veterinary)

MENTHOL

A 1 Menthol Depot, A. W.
Shirley, Proprietor.
Cocking & Co.
Evans, Sone & Co.
Hockin, Wilson & Co.
Seabury & Johnson
Tyler, P.

MERCURIALS

Fuerst Brothers
Hearon, Squire & Francis
May & Baker (Lim.)
Tyler, Thomas, & Co.

METH. SPIRITS, &c.

Boord & Son
Burroughs, J.
Harvey, J., & W., & Co.
Jones & Co.
Phillips, G., & Co.
Smith, S., & Co.

METHYLENE

Robbins, J., & Co.

MICROSCOPES

Darton, F., & Co.
Newsholme, G. T. W. (Slides)
Perkon, Son & Rayman.

MILE

Needle, H. (Condensed)

MORPHIA

Macfarlan, J. F., & Co.
Smith, T. H., & Co.

OILS, PAINTS, &c.

Welling, A. B., & Co. (Lim.)
Fox, W., & Sone

ointment BASHES

Burroughs, Wellcome & Co.
Cheesebrough (Vaseline)
Grindley & Co. (Petrolesum Jelly)
Richardson, J., & Co. (Lim.)

OPTICIANS

Botwright & Grey
Darton, F., & Co.
Perken, Son & Rayment

OTTO OF ROSE

Fuerst Bros.
Shipkoff & Co.
Treat, R. C.

PETROLEUM

Allen & Hanbury
Barclay & Sone (Lim.)
Dee Oil Co. (Lim.)
Fuerst Bros. (Jelly)
Grindley & Co. (Jelly)
Snowdon, Sons & Co. (Jelly)

PAPAIN

Auhn A. (Dr. Finkler)

PATENT AGENTS

Horn & Son
PATENT MEDICNS
Anglo-American Drug Co. (Lim.)
Atkinson & Barber (Infant Preserv)
Barclay & Sons (Lim.)
Beecham, T. (Pills)
Bowe, Dr., Luimient
Bromley, C.
Chemists' Association
Clarke's Blood Mixture
Edwards & Son
Evans, Lescher & Webb
Feunings' St. Powders
Goodall, Backhouse & Co.
Guy's Tonic
Hakka Cream (A.P. Bush & Co.)
Holloway (Pills and Oint.)
Hovenden & Sons
Kreat Haliva
Lalor (Phosphodyne, &c.)
May, Roberts & Co.
Morison's Ointment
Newberry & Sons
Roberte & Co. (Foreign)
Sequan (Lim.)
Sutton, W., & Co.
Wilson, A. (Bunter's Nervine)
Zirziman

PEPSINE, &c.

Armour & Co.
Burroughs, Wellcome & Co.
Chaseburg & Co.
Fletcher, Fletcher & Stevenson
Greiff, R. W., & Co.
Newberry, F. & Sons (Inglavin)
Sutton, G., & Co.
Warner & Co. (Inglavin)
Wyley (Lim.)

PEPPERMINT OIL

Bush, W. J., & Co.
Cocking & Co.
Stevenson & Howell

PERFUMERY.

FANCY SOAPS
Barclay & Sons, Lim.
Bayley & Co.
Beaulette Co.
Blondeau & Cie.
Boehm, F.
Brooke, T. (Solid Perfume)
Burroughs, Wellcome & Co.
Bush, W. J., & Co.
Cavalier Freres
Cheesebrough Manufacturing Co.
Evans, Sons & Co.
Ewen, J., & Sons
Farina, J. M.
Girard File
Grossmith, J., & Sons
Hovenden & Sons
Muhene, F.
Newberry & Sons (Bardoss)
Offinger, E.
Pearle Soap (Lim.)
Price's Patent Candle Co.
Robert Freres
Rosmarie Manufg. Co.
Sanebury, S. (Lav. Water)
Shirley, A. W.
Sozio & Andrioli
Thompson, W. Walters, Hols & Tidman & Son (Co. (Lim.)
Tombarel Freres
Treat, R. C.
Trueitt, H. P. (Lim.)
Warrick Brothers
West, T. (Oke's) Mona)
Woolley, Sons & Co. (Powder)

PEROX. OF HYDR

Robbins & Co.

PHARM. PREPS.

Allen & Hanbury
Anderson & Co.
Barron, Harveys & Co.
Battley & Waits
Berger, F.
Boehringer, C. F., & Sone
Boulton, J., & Co. (Lim.)
Burgoyne, Burdighes & Co.
Burroughs, Wellcome & Co.
Cheeseburg & Co.
Delecar, Ch., & Co.
Duncan, Flockhart & Co.
Ferris & Co.
Fletcher, Fletcher & Co.
Glee Schacht & Co.
Greiff, R. W., & Co.
Hearon, Squire & Francis
Hewlett & Son
Howards & Sone
Jeyes Sanitary Compounds Co
Keith & Co. (Conc. Tincture)
Kingsford & Co.
Lambert Pharmacal Co.
Larsen, G. W.
Learmount, W. D. ("Neytula")
May & Baker (Lim.)
Moe, J., & Co.
Oppeheimer, Son & Co. (Lim.)
Potter & Clarke
Richardson, John, & Co. (Leicester), Lim.
Riegle & Co. | Roberts & Co
Smith & Sone
Smith, T. H., & Co.
Southall Bros. & Barclay
Sutton, W., & Co.
Symes & Co.
Tyler, T., & Co.
White, Alfred, & Sone
Woolley, Sons & Co.
Wride Bros.
Wyley & Co.

PHOTOGRAPHY

Barclay & Sons (Lim.)
Blackrivers Photographic Co.
Botwright & Grey
Darton, F., & Co.
Fallowfield, J.
Greiff, R. W., & Co.
Griffith, W., & Co. (Lim.)
Houghton, G., & Sone
Howards & Sone (Chemicals)
Orme, J., & Co.
Perken, Son & Rayment
Tyler, T., & Co.
White, Alfred & Sone
Zimmerman & Co.

PILL MACHINES

Pindar, J. W.
Toogood, W. (Coater)
Werner & Plescher

PILLS (Coated, &c.)

Allen & Hanbury
Anderson Apothecariss' Hall
Beecham, Thomas
Bromley, C.
Eade & Sone
Evans, Sone & Co.
Hearon, Squire & Francis
Hill, A. S., & Son | Holloway's
Lloyd, T., Howard & Co.
McKeeon & Robbins
Morison's
Newberry & Sons
Richardson, J., & Co. (Lim.)
Wand, S. (Pearl Coated)
Warner, W., & Co. (Coated)
Wride & Co.
Wyley & Co.

PLASTERS

Evans, Sone & Co.
Johnson, W. Johns
St. Dalmas, A.
Seabury & Johnson (Lim.)

- PODOPHYLLIN, &c**
Keith, B., and Co.
- POLISHING**
Smith, T. and H., and Co.
- READLEY & BONDAGE** (A. B. & Co.)
Fletcher, Raybould & Co.
Fordham, W. B., & Sons (Lim.)
Oakey, John, and sons
Prynka Synthesis (Lim.)
Stephens & Co.
- PORECELANE GOODS**
Toozood (K. A. Pat. & Co.)
- POULTRY FOOD**
Spratt's Patent (Lim.)
- PRINTING**
Bowers Bros.
Corsan, J. R. (Glass)
Ford, Shenland & Co.
Hildesheimer & Faulkner
"Liverpool" H. I. Townsend, J.
Townsend, J.
- PUMELINE**
Stern, G. and G.
- QUININE SALTS**
Boehringer, C. F., & Sons
Greiff, R. W., and Co.
Howards and Sons
Zimmermann A. & M.
- RUBNET**
Clements, S. G., and Co.
Duncan, Flockhart & Co.
Greiff, R. W., and Co.
Oldfield, Pattinson and Co.
- SACCHARIN**
Allen and Hanburys
Burroughs Bros.
Burroughs, Wellcome and Co.
- SALICIN**
Macfarlan and Co.
Smith, T. and H., and Co.
- SALICYLIC ACID**
Burkoyne, Burdidge and Co.
Fuerst Bros.
Zimmermann, A. and M.
- SALT**
Stern, G. and G. (Pepsalia)
- SAUCES, PICKLES**
Goodall, Backhouse and Co.
Mason, G., and Co. (Lim.)
Tyrer, P.
- SCHOOLS, &c.**
City School of Chemistry and Pharmacy (Lim.)
Liverpool School of Pharmacy
London Homoeopathic and Medical School
Manchester Col. of Pharmacy
Northern School of Pharmacy
Sheffield School of Pharmacy
South London School of Pharmacy (Lim.)
The School of Pharmacy
Westminster College
- SEALING WAX**
Savage & Co. (Holder)
- SEEDS**
Potter & Clarke
- SELETO STONES**
Bratby and Hinchliffe (Ld.)
Evans, Sons and Co.
Fordham, W. B., & Sons (Lim.)
Lynch and Co.
May, Roberts and Co.
Thosier, E.
- SHAVING**
Hovenden & Sons (Excessis)
Lloyd, Mrs. A. S. (Excessis)
- SLEEP OFF**
Fletcher Bros. & Co.
Jevous, W. B.
Jeyes Sanitary Composites Co.
- SHOP FITTINGS**
Bowling and Govier
Bygrave, J. and W.
Natali, E.
Pothe, H., and Co.
Treble, G., and Co.
- SOAP**
Ayrton and Saunders
Barclay and Sons (Lim.)
Baylor and Co.
Blondeau and Co. (Vinoila)
Bronnley, H., and Co.
Burroughs, Wellcome & Co.
Calvert, F. C., and Co.
Cook, E., and Co.
Fordham, W. B., & Sons (Ld.)
Jeyes' Sanitary Composites Co.
Mulheus, F.
Pearse, Sons
Price, Napoleon, & Co.
Wright, Layman & Umney
- SPECTACLES**
Botwright and Gray
Darton, F., and Co.
Perken, Son and Raymond
- SPONGES**
Cresswell Bros. & Schmits
Evans, Sons and Co.
Peterson, M., and Co.
- STAMPS (REVER)**
Berkley, J.
Hickinson, J.
- SEARCH**
Chancellor & Co. (Mack's Double)
Critchley (Glos.)
- STOPPERS**
Austin and Co. (Sprinklers)
Barnett and Foster
Mellin, O.
Stipendium Stoppers Co.
- STOVES**
Clark, S., and Co. (Lim.)
- SUGAR**
Fletcher, Fletcher and Stevenson
Gibson, R., and Sons
- SUGAR OF MILK**
Burroughs Bros.
- SULFONAL**
Burroughs, Wellcome and Co.
Greiff, R. W., and Co.
May and Baker (Limited)
- SURGICAL**
Ayrton and Saunders
Bailey, W. H., and Son
Barclay and Sons (Limited)
Cooking, J. T.
Harrison, T. H.
Haywood, J. H.
Krohn and Sosemann
Liverpool Patent Lim. Co.
Lindsey & Sons
Powell & Barrett
Quelch, H. C.
Richardson, John, & Co. (Leicester), Lim.
Robinson and Sons
Schutze, F. and Co.
Sedox, Absorbents, and Antiseptics
Warne & Co.
Wood, Vincent
- SYPHONS**
Barnett and Foster
Bratby and Hinchliffe (Ld.)
British Syphon Co.
Fordham, W. B., & Sons (Lim.)
Idris and Co.
Kilner Bros.
Mellin, C.
Schweppe, J., & Co.
Thessler, E.
- STRUPS**
Anderson & Co.
De Carle & Son
Fletcher, Fletcher (Liquors) and Co.
Wood, Cooper & Co.
- TABLETS**
Blyton, Astley & Co. (Sulphur)
Corsan, J. R. (advertising)
- TEA**
Cave, Johnson & Co.
at Tower St. Tea Co.
Walker and Dalrymple
- TEETHING PADS**
Marriott, E., & Co.
- THERMOMETERS**
Bailey, W. H., and Son
Barclay and Sons (Lim.)
Darton, F., and Co.
Evans, Sons and Co.
Hicks, J. J.
Perken Son and Raymen
- TOBACCO, CIGARS, CIGARETTES**
Singleton and Cole (Lim.)
Taddy and Co.
- TOILET**
Addie, W., and Son
Allen & Hanburys (Chriema)
Balm of Bethesda
Burroughs, Wellcome & Co. (Lanoline)
Dee Oil Co. (Lim.)
Hovenden & Sons
Quelch, H. C.
Rowland, A., and Sons
Truefitt, H. P. (Limited)
- TOOTH PASTE**
Anglo-American Drug Co. (Lim.)
Beecham, T.
Jewsbury and Brown
Sutton, O., and Co. (Block)
Wilson, A. (Bunter's)
Woods, M. (Arca)
- TRADE MARKS**
Fleur, J. B.
Horn & Son
Trade Mark Agency
- TRUSSES**
Bailey, W. H., and Son
Evans, Sons & Co.
Haywood, J. H.
Lindsey & Sons
Wood, V.
- TYPEWRITERS**
Remington Standard
- URETHANE**
Howards & Sons
- VACCINATION**
Himes, Dr.
Vaccine Association (Lynch)
- VALUES AND**
TRANSFER AGENTS
Berdoe and Co.
Brett, F. J.
Crocker, G. B., & Co.
Orridge and Co.
- VASELINE**
Chesebrough Manufacturing Co.
- VETERINARY**
Bird & Storey | Day and Son
Day, Son and Hewitt
Elliman, Sons and Co.
James, W. H. (Blister)
Jeyes' Sanitary Composites
Lloyd, T., Howard & Co.
Rookledge, F. E.
Spratts (Dogs)
Walker, Troke and Co.
Webb, Fardon & Co.
Wyleys, Lim.
- VINOILA (Superf' t'd)**
Blondeau and Co.
- WEED KILLER**
Aome Chemical Co.
Boundary Chemical Co. (Lim)
Butcher, W., & Son
Horticultural and Agriculture Chemical Co.
- WHOLESALE AND EXPORT DRUGS**
Allen and Hanburys
Anderson & Co.
Barnett, Harveys and Co.
Battley and Watts
Burkoyne, Burdidge and Co.
Bush, W., and Co.
Bush, W. J., and Co.
Clay, Dod and Co.
Coward, G. F., & Co.
Delacre, Ch., & Co.
Evans, Sons and Co.
Evans, Leecher and Webb
Ferris and Co.
Fox, W., and Sons
Goodall, Backhouse and Co.
Harker, Stag and Morgan
Heaton, Squire and Francis
Hewlett and Son
Hill, A. S., and Son
Hodgkinson, Treacher and Co.
Lothhouse and Saltmer
Lloyd, T., Howard and Co.
Macfarlan, J. F., and Co.
Oldfield, Pattinson and Co.
Potter and Clarke
Richardson, J., and Co.
Smith & Sons
Sykes & Co.
Thompson and Capper
Walker, Troke and Co.
Willows, Francis and Entle
Woolley Jas., Sons and Co.
Wright, Layman and Umney
Wyleys, Lim.
- WINES, SPIRITS**
Ambrecht, Nelson and Co. (Gos)
Goodall, Backhouse and Co.
Frenen Hygienic Soos (Gos)
Idris & Co.
Miller, A., & Co. (Orange)
Robinson, B.

HALL'S COCA WINE

A HIGH-CLASS MEDICATED WINE AT A REASONABLE PRICE

THE LATEST TESTIMONY TO THE EXCELLENCE OF
HALL'S COCA WINE.

"The Lancet," April 9th, 1892.

HALL'S COCA WINE (STEPHEN SMITH & Co., Bow, E.)

This is an excellent Wine, with an alcoholic strength equal to good port, possessing a similar flavour and bouquet, but associated with it also is the peculiar though pleasant aroma of the fresh Coca leaf. Ether when shaken with the Alkalised Wine yielded a residue on evaporation which with hydrochloric acid gave characteristic Crystals of Cocaine hydrochlorate; they were further identified by the numbing effect produced by the Crystals when rubbed on the tip of the tongue. Analysis gave the following data: Alcohol, 15 per cent. by weight, 18.50 per cent. by volume; total solid matter, 18.73 per cent. (sugar and coca principles); mineral matter, 0.33 per cent. The restorative and invigorating properties of the Coca leaf are now well known, and it may be very conveniently and palatably administered in the form of an agreeable Wine such as that under examination, a wineglassful of which is stated to contain one drachm of the soluble active ingredients of the leaves.

STEPHEN SMITH & Co., BOW, LONDON.

A "STORES" CAUGHT!

Mr. JUSTICE STIRLING.—October 30, 1891.

KEATING v. KIBBLE & CO.

THE Defendants are Proprietors of large Stores at Deptford, and when asked for "Keating's Powder," sold by their shopmen an article not made by me. The Defendants denied that this was done with their knowledge, and this may be conceded, but it cost them over £40, although in this instance I pressed my Solicitors to be as considerate to them as possible. The Court ordered the Defendants to pay the whole costs of the action, and issued an injunction restraining them from offering for sale any preparation other than that prepared by Thomas Keating under the name of "Keating's Insect Powder."

IMPORTANT NOTICE.

12 BRIDE LANE, LONDON, E.C., *March 15, 1892.*

WHEREAS I have reason to believe that certain persons have sold to Customers Packets of what they represent to be KEATING'S INSECT POWDER, which Powder has not been manufactured by me, I HEREBY GIVE NOTICE that I shall institute Legal Proceedings against persons found to be improperly selling any but Keating's Insect Powder to customers asking for it, which action renders them liable to very heavy penalties.

THOMAS KEATING.

A CHEMIST.—HEAVY DAMAGES.

In the High Court of Justice—Chancery Division. Mr. JUSTICE NORTH—October 26, 1886.

KEATING v. POLL.

IT WAS ORDERED—

That the Defendant be perpetually restrained from stating or causing to be stated that Keating's Persian Insect Destroying Powder contains any substance poisonous to animals or human beings, or from making any statement to the effect that such Powder is dangerous to animals or human beings.

IT WAS FURTHER ORDERED—

That the Defendant, William Sheppard Poll, do pay to the Plaintiffs their costs of this action.

PETER TYRER'S ^{1^D} LINES

CHEMISTS SAVE TIME AND MONEY

By selling my "Plain Label"* Lines. Should remit prices quoted for sample $\frac{1}{4}$ -gross lots. If not satisfactory, I will pay carriage back, and return cash.

*PENNY MENTHOLS

On $\frac{1}{4}$ -gross cards 5/6 and 6/6

*PENNY (Tasteless) PILLS

6 in a box, $\frac{1}{4}$ -gross cards 4/6

SPECIAL NEW LINE.

*PENNY (Tasteless) PILLS

6 Pills in Glass Tubes, $\frac{1}{4}$ -gross cards 5/6

*PENNY SOOTHERS

Black Teats, fitted complete with Shield, Union, and Cord, on $\frac{1}{4}$ -gross cards at 7/-; this is a good line, and sells freely.

*PENNY TOOTH TINCT.

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[3]

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(Originally introduced in 1855).

Guaranteed free from **ARSENIC**

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FOR DESTROYING

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Warranted to Keep for Export.



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FOR [NEVER FAILS]

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PRIME DALMATIAN.

ENGLISH CROCOD.

The most energetic Insecticide.

Kills Bugs, Fleas, and all offensive

Insects. Quite harmless to

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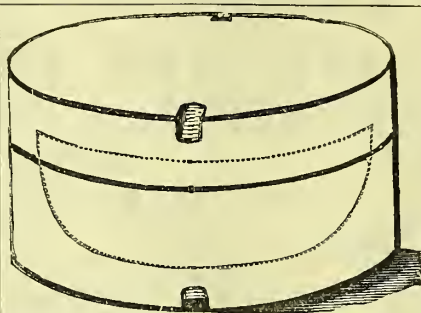
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Are claimed to be the most
perfect and convenient yet offered to
the Trade.



Owing to the increasing demand
for our Patent Pots, we have in-
troduced a Special THIN Series
for Dispensing.

These Pots are beautifully
glazed and finished, and, being
very light, are specially adapted
for sending by post.

ORDINARY THICKNESS—

1 dr.	2 dr.	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{2}$	2	3	4	6	8 ounces.
1/6	1/6	1/6	1/8	1/10	2/-	2/3	2/10	3/6	4/6	5/6 per doz.

THIN FOR DISPENSING—

$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{2}$	2	3	4	6	8 ounces.
1/7	1/9	2/-	2/2	2/5	3/-	4/-	5/-	6/- per doz.

TOOGOOD'S BATHING CAPS. *Write for New Season's List.*
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47 LAMB'S CONDUIT STREET, LONDON, W.C.,

Manufacture the following Specialities—

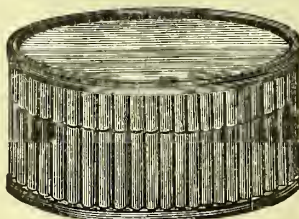
"STIPENDUM" CORK STOPPERS, in all sizes.
"STIPENDUM" CORK-LINED CAPS, for Pomade Bottles.
"STIPENDUM" SCREW CAPS, for Pomade Bottles.
"STIPENDUM" OPENERS, for Stoppered Aërated Water Bottles.
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IN TERRA COTTA, CHOCOLATE, AND BLACK.

The Grease-Proof Covered Pots have perfectly fitting lids, are practically unbreakable, and the only article really answering the purpose intended.

The following Analytical Report should be noted by
the trade:—

London, January 5, 1891.

"We have examined the two covered pots marked
November 21, 1890, one containing strong nitrate of
mercury ointment, and the other iodine ointment, the
object being to discover—(1) Whether the ingredients
of which the pots are composed have in any way
affected the ointments; (2) Whether the pots have
been deteriorated by the action of the ointments.



We hereby certify that no trace of any of the
ingredients of the pot can be discovered in either of
the ointments, and further that the pots themselves
were found not to have been acted on at all; and we
further consider 'Stipendum' admirably adapted for
such pharmaceutical preparations.

Signed, C. T. KINGZETT, F.I.C., F.O.S.
(Ex Vice-President Society of Public Analysts)
B. H. HARLAND, F.I.C., F.O.S.,
(Public Analyst)."

To be had of all Druggists' Sundriesmen.

Wholesale only of the Company.

NOTES FOR CHEMISTS.

We supply our Manufactures to the legitimate Drug Trade only.

WE INVITE YOUR ATTENTION TO THE FOLLOWING NOTES:—

MEDICATED LOZENGES.

We have spent much time in compiling suitable formulæ for our products in this department. The various combinations have not been formed in any haphazard fashion, and we cannot too strongly impress upon our friends the attention we have paid to the therapeutical value of the agents selected. We think we may safely say that therapeutics is the most essential part of medical science, for while there are other branches of much importance, it is the *cure* of disorders which is always in view. In our list we offer many formulæ from which chemists will have no difficulty in selecting active and efficient lozenges.

JUJUBES AND PASTILLES.

We think it will be agreed that the favour enjoyed by this class of goods is due much to their appearance and palatableness. The finish and well-balanced flavours of our Jujubes and Pastilles give them a position distinctly their own. We have a considerable variety in this line, and below enumerate a few of the most freely selling.

COATED PILLS.

Our Pill Department is equipped with the latest machinery and contrivances for the production of Pearl-coated Pills. The great desideratum in Coated Pills is, of course, their perfect solubility, and in this respect we commend our make. We also undertake the preparation of private formulæ on favourable terms. New and Revised List on application.

Bronchial Lozenges.	} Some Lozenges having a brisk sale, and specially suitable to the season.	Tannin and Cayenne Lozenges.
Chlorodyne „		Black Currant „
Balsamic Cough Lozenges.		Super Cough „
Voice Lozenges.		Compound Sulphur „
Linseed, Liquorice, and Chlorodyne Lozenges.		Heliotrope Cachous.
		Violet „

JUJUBES AND PASTILLES.

Glycerine Pastilles.	} Keep well, splendid finish, and good flavours.	Voice Jujubes.
Glycerine and Paregoric Pastilles (PATENT 17,213.)		Delectable Jujubes.
Glycerine and Black Currant Pastilles.		Magnum Bonum Jujubes.
Mixed Fruit Pastilles.		Liquorice Jujubes.

We respectfully request you to send for samples and prices of all classes of Medicated and Chemists' Confectionery, Coated Pills, Extract of Malt in bottles, either plain or combined with Cod Liver Oil, and Granular Effervescing Preparations. When ordering through Wholesale Houses, please endorse your order B. A. & Co.

BLYTON, ASTLEY & CO.

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"LANOLINE"

Every Chemist

SHOULD USE

"LANOLINE" AS AN OINTMENT BASE,

AS IT

never turns rancid

admits of the admixture of any quantity of water;
confers stability and permanence on ointments prepared with it.

UNGUENTUM LANOLINI
is an Ointment

WHICH CONSISTS OF

"LANOLINE" and 30 per cent. of Soft Paraffin B.P.

UNGT. LANOLINI is comparatively inexpensive.

UNGT. LANOLINI is non-sticky.

TOILET "LANOLINE."

A SUPERIOR PREPARATION FOR THE SKIN.

IN TUBES CONVENIENT FOR USE IN

**SUNBURN, CHAFING, CHAPPING, REDNESS, AND
WRINKLING OF THE SKIN.**

"LANOLINE" and its preparations, Soaps, Pomades, &c., can be obtained from

BURROUGHS, WELLCOME & CO.

SNOW HILL BUILDINGS, LONDON, E.C.

New Developments.

Tinctures and Tinct. "Tabloids."

Of all classes of official preparations none have been so deservedly popular, or retained the public favour for so long a period, as that group of more or less alcoholic solutions which we choose to know as "Tinctures."

No appellation in the whole range of pharmaceutical nomenclature is so liable to misinterpretation and misuse; indeed, from a purely philological standpoint, the very word "Tinctures" is inadmissible in scientific pharmacy. Popular though they may have been, yet we think their days are numbered; for in the growing desire of the present day, both on the part of the physician and the pharmacist, to bring about a more rational system—which in this instance means, really, definitiveness in the preparation of medicines—we see the necessity of constant constitution and strength. Neither of these qualities, unfortunately, is to be found in the tincture group. We have had ample personal experience of the provokingly unequal character of the same-named preparation from different sources, especially in regard to the tinctures of Bark, Hyoscyamus, Belladonna, Opium, and Cannabis Indica; and we have no doubt but that ours was merely a repetition of the experience of others. The progressive march of pharmacy to the goal of definite dosage and accurate measurement of active principles is a matter of real concern to the medical profession; and the laudable attempts now made by capable representatives of the pharmaceutical art to bring the "Tincture" group in line with present day requirements will meet with the reward they deserve. The indefinite and unsatisfactory character of Tinctures was admitted, officially, when the proposal to standardise them was finally adopted by the pharmacopœia Committee of the General Medical Council. But this standardisation, while a distinct step forward, will scarcely save the Tinctures from ultimate extinction, for the simple reason that to keep the strength of a tincture at a constant and known point this process of standardisation and estimation will have to be constantly repeated! Practically, this is impossible; for it is scarcely to be expected that the well-trained pharmacist can devote time and labour to a task which will never repay him. Are pharmacists prepared to do this? We think not. And yet, can they guarantee the strength of, say, Tincture of Nux Vomica a month after date of standardisation? And who is there that would be rash enough to

guarantee the percentage of Morphine in the Tincture of Opium three months after the date of standardising? Few, we think, who know the proneness of these preparations to change.

What is the remedy, then? The whole remedy for this state of things we are not able to suggest; but we may say that a step in the right direction, offering very large development, has been made in securing uniformity and reliability in the new "Tabloids" of Tinctures. These "Tabloids" are made from freshly standardised Tinctures of various drugs, and consequently are accurate in dosage. Where the exhibition of single drugs can be admitted, these "Tabloids" are immeasurably superior to the liquid preparations. A very important aspect of these "Tabloids of Tinctures" is the value to the devotees of total abstinence; for these Compressed Drugs are absolutely free from alcohol—a piece of information which will be extremely valuable and interesting to this large, important, and enthusiastic community. The more generally prescribed, and consequently the more important of the tinctures, such as Belladonna Aconite, Opium, Compound Camphor (Paregoric), Hyoscyamus, Nux Vomica, the stronger Ginger (so-called Essence), are already represented in the list of "Tincture Tabloids;" and it is to be hoped that, as time goes on, and experiments warrant, everyone of this class of galenical preparations with any demand for it at all, will be added. The convenience to the physician, of having reliable, uniform, and portable material at hand, is too obvious to require reference; while to the patient, tired of, and disgusted with nauseating and unpalatable mixtures, the "Tabloid" system becomes an inestimable boon. The following have already been submitted to, and obtained the approval of, the medical profession:—

"TINCT: TABLOIDS"

(Official Tinctures).

Belladonna Tinct. "Tabloids"	...	...	1 minim.
" " " "	...	...	5 "
" " " "	...	...	15 "
Camph. Co. Tinct. " "	...	...	5 "
" " " "	...	...	15 "
Cannabis Indica Tinct. "Tabloids"	...	...	5 "
Hyoscyami Tinct. " "	...	...	1 "
Nucis Vom. " "	...	...	1 "
" " " "	...	...	3 "
" " " "	...	...	10 "
Opii Tinct. "Tabloids"	...	...	2 "
" " " "	...	...	5 "
" " " "	...	...	10 "
Zingit. Fort. " "	...	...	" "

BURROUGHS, WELLCOME & CO., Snow Hill Buildings, LONDON, E.C.

Will be happy to supply trial Specimens to medical men free on request.

THE PHOTOGRAPHIC "TABLOIDS."

(B. W. & CO.)

PORTABLE. ACCURATE. ENERGETIC. LASTING.**These "TABLOIDS" are most convenient for preparing Solutions.**

PRICES TO THE TRADE { Pyro-developer, in Bottles of 25 and 70, at 4/6 and 9/- per dozen.
 { Quinol-developer, in bottles of 24 and 70, at 4/6 and 9/- per dozen.
 { Accelerator, Bottles of 30 and 100, at 3/- and 6/6 per dozen.

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WRIGHT'S "ESS. BOUQUET,"

White Rose, White Lilac, White Heliotrope, Lily of the Valley.

WRIGHT, LAYMAN & UMNEY, Southwark, LONDON.**AWARDS AND
APPOINTMENTS TO DATE:**

{ Diploma d'Honneur, Rosendael, 1891. Royal Naval
 { Exhibition, 1891. Gold "Medal," Brussels, 1891.
 { Sole Contractors to "VENICE IN LONDON," 1892.

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—PREVENTS—

GOUT, RHEUMATISM, AND INDIGESTION.

MIXES EQUALLY WELL WITH WINES, SPIRITS, OR MILK.

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{ The QUARTER BOTTLE contains 7 fluid ounces—equivalent
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Sample Cases of 100, 25s., Packing and Bottles included.

SUPPLIED AT ALL FIRST-CLASS HOTELS, CLUBS, AND RESTAURANTS.

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ESTABLISHED 1859 AS A MONTHLY. SINCE MARCH, 1886,
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BRANCH OFFICE, FINK'S BUILDINGS, MELBOURNE,
AUSTRALASIA.

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South African Pharmaceutical Association.
The Pharmaceutical Association of New Zealand.
The Central Association of New Zealand.
Otago Pharmaceutical Association.
The Pharmaceutical Society of Queensland.
The Pharmaceutical Society of South Australia.
Tasmanian Pharmaceutical Society.

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POPULAR BOOKS FOR CHEMISTS.—The following are published at the offices of this journal, and may be obtained from most of the wholesale houses at the published prices:—

"The Art of Dispensing," 3s. 6d.; by post, 3s. 10d.
Alpe's "Handy-book of Medicine-stamp Duty," 2s. 6d.; by post, 2s. 9d.

Proctor's "Pharmaceutical Testing," 2s. 6d.; by post, 2s. 9d.

"Veterinary Counter-practice," 3s. 6d.; by post, 3s. 9d.

These books have been written for daily use, and their successful publication has proved their value to business men.

Summary

MR. ALPE contributes some important notes on Medicine-stamp Act interpretation.

WE continue our notes on photographic matters, and comment upon several novelties.

WE note the formation of several limited companies associated with the drug-trade.

THE report which we published last week regarding the condition of pharmacy in British Guiana is confirmed by another correspondent.

ANOTHER view of the Medical Staff Corps as an outlet for pharmaceutical energy is presented this week. It is even more unfavourable than the account given in our Summer issue.

THE use of Indian opium, notoriously deficient in morphine, for pharmaceutical purposes is discussed in our Correspondence and Editorial columns. In Burma chemists are being compelled to use it.

THE Pharmaceutical Council have issued to the trade a circular in regard to the sale of proprietary medicines containing poisons, and drug-stores and grocers are taking steps to fight the matter out. Upon this subject we comment.

THE Apothecaries' Company have signally failed at Morpeth in a prosecution against an unqualified assistant acting for a club doctor. Judge Digby Seymour had clear views as to the incidence of the Apothecaries Act in such cases.

MESSRS. FARR AND WRIGHT summarise in this issue the work which they have done during the past five years on the preparation of tinctures of alkaloidal drugs, to which they add an account of the experiments on tincture of gelsemium.

These gentlemen also call attention in our Correspondence columns to the fact that B.P. laudanum does not contain the theoretical percentage of morphia, but about a third less. This fact has an important bearing upon the Nottingham prosecutions of last week.

Gazette.

PARTNERSHIPS DISSOLVED.

Bell & Bradley, Leytonstone, surgeons and apothecaries.

Evans, Rees, & Latham, West Bromwich, surgeons and apothecaries.

Goodall, J. C., and Armstrong, H., under the style of J. C. Goodall & Co., Cardiff, oil merchants and grease manufacturers and merchants.

Hardman, J., and Holden, J. J., under the style of Hardman & Co., Newton Heath, Clayton, and Bradford, near Manchester, and Blackburn, tar distillers and chemical manufacturers.

Hardman, J., Holden, J. J., and Holden, G. H., under the style of Hardman & Holdens, Newton Heath, near Manchester, manufacturers of alizarine and carbonisers of coal.

Lowndes, S., and Finch, H., under the style of the Marple Chemical Company, Marple, chemical manufacturers.

Morison, A., and Morison, B. G., Green Laues, Highbury, and Marquess Road, Canonbury, surgeons, accoucheurs, and general practitioners.

Perkins, Steele, and Smith, H. E., Strathman, surgeons, apothecaries, and accoucheurs.

THE BANKRUPTCY ACTS, 1833 AND 1890

ADJUDICATIONS.

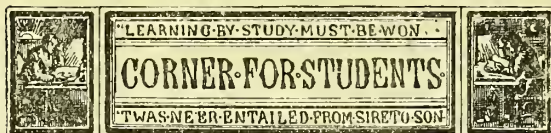
Martin, Alfred George Edmunds (described in the Receiving Order as George E. Martin, and trading as George E. Martin & Co.), Fenchurch Street, City, and Hoe Street, Walthamstow, importer of essential oils.

Parry, John William, Bagillt, Flintshire, physician and surgeon.

RECEIVING ORDERS.

Parry, John William, Bagillt, Flintshire, physician and surgeon.

Wise, Joseph Norman, Durham, chemist and druggist.



CONDUCTED BY RICHARD J. MOSS, F.C.S., F.I.O.

QUALITATIVE ANALYSIS.

A MIXTURE of three salts will again form the subject of the analytical exercise. The mixture is to be submitted to a thorough systematic examination; its constituents are to be detected, and all other substances proved absent.

Students' applications for portions of the mixture will be received up to Wednesday, August 24, and the samples will be forwarded immediately.

Students' reports will be received up to Saturday, September 3. Each report should contain a concise account of the work done, and should include a list of the constituents detected; in this list accidental impurities should be distinguished from the principal constituents of the mixture.

REPORTS.

The subject of the last exercise was a mixture consisting of 3 parts of potassium alum, 1 part of sodium sulphite, and part of calcium phosphate.

The calculated composition of such a mixture is:—

Al	3.48
Ca	7.74
K	4.93
Na	3.01
PO ₄	12.28
SO ₂	5.23
SC ₄	24.23
H ₂ O	39.07
	<u>100.00</u>

The only impurities of note were traces of iron and chlorine.

Sixty-five students received packets of the mixture, and forty-two reports were sent in. Only six students detected the constituents of the mixture correctly. The failures in the detection of the several constituents were:—Calcium, 11; potassium, 9; sodium, 8; aluminium, 3; sulphurous radicle, 32; phosphoric, 10. Nobody failed in the detection of the sulphate.

It is noteworthy that only one student out of every four succeeded in detecting the sulphurous radicle, of which the mixture contained nearly 5½ per cent. It is scarcely less remarkable that in several cases the sulphur dioxide which was evolved when the powder was treated with an acid was regarded as odourless, and accordingly it was assumed to be carbon dioxide. Air containing a large proportion of carbon dioxide may be taken into the lungs without any appreciable effect; but air containing a very small quantity of sulphur dioxide is so irritating that it is quite irrespirable. It is therefore difficult to understand how anybody with the most elementary knowledge of practical chemistry could confound the two gases; yet such is the fact. This can scarcely be attributed to a defect of the sense of smell analogous to colour-blindness, as there is a wide difference between the chemical effects of the two gases on the membrane of the organs of respiration. A more likely explanation is that many persons are very careless in the use of the sense of

smell, and take no trouble to cultivate it. We have repeatedly drawn attention to mistakes that are made about the smell of acetic acid; various irritating gases and vapours are constantly set down to this acid notwithstanding its very characteristic smell. Such mistakes cannot be avoided without some trouble; but surely it is worth while cultivating a sense so useful and important in a variety of ways as that of smell. We recommend our correspondents not to decide hastily that a certain smell is due to a certain substance without actual comparison with the known substance. For example, in the present case, when the gas evolved was supposed to be like carbon dioxide, it would have been more satisfactory if carbon dioxide had been prepared under similar conditions from a carbonate, and the smell and other properties of the two gases directly compared. In making such a comparison it is scarcely necessary to observe that all the conditions should be as nearly as possible the same; it would never do to compare a slight trace of an unknown gas or vapour with a large excess of a known one. It must be remembered, too, not to confound mineral gases or vapours with substances in the pure state. With a little practice it is wonderful what an amount of assistance may be derived from the sense of smell in chemical work.

PRIZES.

The first prize for the best analysis has been awarded to JAMES A. HARE, care of Messrs. Bell & Riddle, Hexham, Northumberland.

The second prize has been awarded to WALTON PORTER, 9 Edge Hill, Whitehaven.

Marks Awarded for Analyses:—

J. A. Hare (1st prize)	100	Aconitum	76
Walton Porter (2nd prize)	98	Atropine	75
W. Hood	96	H. F.	75
Belladonna	95	F. F. A. Tunbridge	75
Danwer	95	Elexine	74
Bee Gee	92	Salipyrin	73
Pepsine	90	Vigovina	73
Verax	90	Schizocarp	72
A. Lander	89	Ornum	71
John	88	J. Rose	70
P. Macrocephalus	87	T. O. B.	63
N. Howard	87	Sapientia	65
T. K. Dublin	86	Acidulous	65
Zirconium	85	Nena	63
H. McL. R.	85	Verdant Green	60
A. Bunsen	83	Tyro	58
Moyhitt	83	Scillie	55
L. F. M.	82	Botanic	45
H. Bowden	80	Victory	45
Cogito	79	Potassium	40
KCy.	78	Bowser	35

HALF-YEARLY PRIZE.

This being the second month in the special prize competition, we give the names of the first twenty competitors in order of merit, viz.:—

J. A. Hare	199	John	182
Walton Porter	198	A. Bunsen	179
Belladonna	192	T. K. Dublin	178
Bee Gee	187	Cogito	177
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A. Howard	183	Atropine	173
Zirconium	183	L. F. M.	172

TO CORRESPONDENTS.

Prizes.—The students to whom prizes are awarded are requested to write at once to the Publisher, naming the book they select, and stating how they wish it forwarded.

Any scientific book that is published at a price not greatly exceeding half a guinea may be taken as a first prize.

Any scientific book which is sold for about five shillings may be taken as second prize.

Note.—All communications should include the names and addresses of the writers.

DANWER.—Your results were correct, but your report was not as carefully prepared as that which received the full number of marks.

PERSINE.—You obtained correct results more by accident than by design. Calcium phosphate was precipitated along with aluminium hydrate, and the detection of calcium under such conditions required a different method from that which you employed.

VERAX.—You obtained an indication of the sulphite in the preliminary examination, which you ought to have followed up.

JORN.—Your report this time shows great improvement.

P. MACROCEPHALUS.—When the powder was tested with water and warmed, sulphurous anhydride was evolved, showing that the action of water alone was sufficient to effect a transposition of some of the constituents. Under such circumstances one would expect to find some of the calcium phosphate in the aqueous solution.

ZIRCONIUM.—The effervescence you observed was due to the escape of sulphurous anhydride, and you ought to have recognised it from its peculiar suffocating odour.

H. McL. R.—See remarks to "Zirconium." It was unfortunate that you overlooked the sulphite, as your report seems to have been drawn up with great care.

MOXHITT.—The discharge of colour which you observed on adding hydrochloric acid to the solution to which you had added ferric chloride was due to the reduction of the ferric salt by free sulphurous acid.

L. F. M.—You did not account for the "pungent smell" observed as a result of the action of sulphuric acid on the powder.

COGITO.—The precipitate with sulphuretted hydrogen was not of the brilliant lemon-yellow colour of arsenious sulphide; further examination would have shown it to be due to sulphur.

KOY.—Although the quantity of sodium was small, it gave a flame-colouration almost sufficient to obscure that of the potassium.

ACONITUM.—You omitted to describe the method followed for the examination of the precipitate produced by ammonium hydrate. A little of this precipitate heated in the Bunsen flame on a platinum wire would have shown that something more than alumina was present.

ATROFINE.—If you had employed a sufficiency of ammonium hydrate as a group-reagent, nothing could have been left in the solution which would have given a precipitate with sodium phosphate.

H. F.—See remarks to "Atropine."

ULEXINE.—The molybdic-acid test is by far the best for phosphates. With ordinary care a trace of phosphoric acid can scarcely escape detection.

SALIPYRIN.—It was not likely that manganese would be found in a colourless powder. You can always make sure of the presence or absence of manganese by igniting the suspected precipitate with sodium carbonate and nitrate: a trace of manganese gives a green colour.

VIGOVINA.—The white precipitate which you obtained with calcium chloride was calcium sulphate. An oxalate would have revealed its presence by the production of a carbonate on the ignition of the powder.

J. ROSE.—The acidity to test-paper is accounted for by the presence of alum. In applying the molybdic-acid test for phosphoric acid, you must have the reagent in excess, as ammonium phospho-molybdate—the yellow crystalline precipitate which is formed—is slightly soluble in an excess of phosphate.

SAPIENTIA.—The metals sodium and potassium constituted nearly 8 per cent. of the mixture, and when the ammoniacal solution from which the other constituents had been separated was evaporated and ignited, a very noticeable residue was left. According to your report, this operation was not carried out.

ACIDULOUS.—See remarks to "Sapientia." You did nothing to detect the alkalies.

NENA.—The calcium was precipitated in the form of phosphate along with the aluminium hydrate, and you did not adopt the proper method for its detection. On this point you must consult your text-book. Your test with silver nitrate in the presence of free nitric acid did not prove the absence of phosphates.

VERDANT GREEN.—Effervescence may be due to many causes other than the evolution of carbon dioxide; you should have examined the gas evolved.

TYRO.—The method you employed was not adapted for the analysis of a mixture of salts containing a phosphate insoluble in water. Finding that ammonium hydrate as a group-reagent gave a precipitate, the first thing to be done with the precipitate was to see whether it contained a phosphate, oxalate, or other salt soluble only in acid solutions; the next point was to employ a method of separation adapted to the circumstances of the case. For information as to the method to be employed we must refer you to your text-book.

SCILLÆ.—The fact that you failed to obtain a precipitate on adding ammonium hydrate to the acid solution shows clearly that you did not use enough of the reagent; it was necessary to add it in decided excess.

VICTORY.—Your test for phosphoric acid must have been very carelessly applied; the quantity present was large. See remarks to "Scillæ."

POTASSIUM.—You ought to test your power of distinguishing between acetic and sulphurous acids by smell. If you are not able to recognise each acid with certainty, both in traces and in quantity, you must be careful to avoid the errors that a defective sense of smell will lead to.

English News.

Lady-pharmacists.

Lincolnshire now boasts a lady-chemist (says the *Spalding Free Press*) in the person of Miss Tillson, daughter of Mr. Tillson, of Long Sutton. This young lady is said to be an earnest student, and the first in the county to achieve the distinction. Both Miss Tillson and the little town of Long Sutton are, therefore, to be heartily congratulated. But the "Lords of the Creation" may very well ask in what walk of life are they to be permitted to hold the field all to themselves?

Midland Counties Chemists' Association.

A meeting of the Council of the above Association was held at the Mason College on Friday, August 12, when the following officers were appointed:—President, Mr. C. Thompson (Birmingham); Vice-Presidents, Mr. W. Jones (Birmingham) and Mr. J. Hinds (Coventry); Hon. Treasurer, Mr. C. J. Arblaster (Birmingham); Hon. Librarian, Mr. G. E. Perry; Auditors, Messrs. T. W. Chapman and E. G. P. Ferriday; Hon. Sec., Mr. F. H. Alcock. Messrs. Hutton, W. Jones, and T. Barclay were appointed delegates to the B.P. Conference.

The Marbles Tempted Him.

A remarkable prosecution was instituted at Cardiff on Friday by the Bristol and District Bottle Exchange and Protection Association. It appears that the loss arising from broken and lost bottles in the mineral-water trade in Cardiff amounts annually to no less than 4,000*l.*, and as during a recent gala in the Sophia Gardens Field, a lad named Edward Tooze Hawkins, was caught in the act of wilfully breaking a number of bottles, it was determined to prosecute him. The bottles belonged to Messrs. Basker & Co., who, it was stated, had delivered, amongst other orders to caterers at the sports, 20 dozen ginger-beer bottles. These when empty were left on the ground to be collected on the following day, and it was proved that the boy Hawkins, in his anxiety to get possession of the glass marbles inside them, had wilfully destroyed the bottles, so that when the vanman of Messrs. Basker reached the ground, he found that out of 240 bottles delivered, only fourteen remained whole. The lad pleaded guilty, and was fined 1*s.*, and ordered to pay the damages, which amounted to 28*s.* The Stipendiary expressed the hope that the lad's father would administer a sound thrashing.

Half a Million a Year Profit.

The report of the directors of Brunner, Mond & Co. (Limited) for the half-year ended June 30 last shows a balance to credit of profit-and-loss account on the working for the half-year of 261,450*l.* 1*s.* 1*d.*, which, with 35,916*l.* 6*s.* 7*d.* brought forward from the previous half-year, makes a total of 297,374*l.* 7*s.* 8*d.* The directors propose to deal with the balance as follows:—Dividend on the Preference capital at 7 per cent. per annum, 15,356*l.* 5*s.*; on the Ordinary capital, at 50 per cent. per annum, 152,500*l.*; amount to be written off patents account, 2,500*l.*; amount to be placed to reserve fund, 50,000*l.*; balance to be carried forward, 77,018*l.* 2*s.* 8*d.*—total, 297,374*l.* 7*s.* 8*d.* For the previous half-year, ending on December 31 last, the dividends and amounts written off and placed to reserve fund were the same as for the six months just closed, the only difference in the two reports being that 77,018*l.* 2*s.* 8*d.* is carried forward this half as against 35,916*l.* 6*s.* 7*d.* for the half-year ending December 31 last.

Stealing a Chemist's Sovereign.

The Hanley magistrates have committed for trial a man named William Cotton on a charge of having stolen 1*l.*, the money of Mr. Fresson, chemist and druggist, of that town. The prisoner had been employed to help move some goods for the prosecutor. Mr. Fresson placed a packet containing 30*s.* in gold and 4½*d.* in coppers on a shelf in the shop, and the prisoner professed to have found half-a-sovereign and 4½*d.* Information was given to the police, and the prisoner was arrested. He admitted the theft, and said he was "hard up" at the time.

Unsatisfactory Drugs in Birmingham.

Dr. Alfred Hill, the Birmingham city analyst, has reported that of fifteen samples of sal volatile purchased six were not of the proper strength or composition, and not one of six seidlitz powders was of the Pharmacopœia standard.

Institute of Chemistry Reform Association.

This body, at the end of its contest, finds itself somewhat short of cash. There were 131 half-crowns subscribed (16*l.* 7*s.* 6*d.*), but the expenses of conducting the contest from January 12 to March 21 amounted to 58*l.* 11*s.* 9*d.*, viz:—Printing and stationery, 29*l.* 10*s.*; postage-stamps, 13*l.* 11*s.* 1*d.*; telegrams, 16*s.* 7*d.*; railway fares, 8*l.* 0*s.* 10½*d.*; and sundries, 6*l.* 13*s.* 2½*d.* At the meeting at the Guildhall Tavern on July 20 it was resolved to ask those members of the Institute who are specially interested in the movement to subscribe to extinguish this debt, and form a fund to cover future expenses. As a result of this, 30*l.* 9*s.* has been subscribed so far, and the "bat" is going round now for the balance.

Government Chemistry.

There appears to be little improvement in the quality of the chemistry which students under the South Kensington scheme annually present to the examiners. The chemistry examiners of the Science and Art Department (Professors Thorpe and Tilden) report that the work done in advanced theoretical inorganic chemistry was the least satisfactory, and in this section the greatest number of failures occurred. It seems that few candidates possess any real knowledge of chemical principles or show accurate observation of facts, owing to students in this stage being left by the teachers very much to themselves and their text-books. A considerable reform is also needed in the teaching of practical chemistry in both the elementary and advanced stages. A large proportion of the candidates succeed in detecting the constituents of the salts given, but the work seems to be done mechanically without any proper understanding of the nature of the operations employed. The students carry the tables in their heads, and are more liberal in transferring them to the examination-paper than the nature of their specimens allows.

Is Diachylon an Abortifacient?

An inquest was held at Leicester last Friday regarding the death of Alice Wright, 22, the wife of a shoemaker, and herself a hosiery-hand. The evidence of her husband went to show that deceased had a miscarriage ten months ago, and a return of hemorrhage about eight weeks ago. Two or three days after that she was taken very ill at her work. Dr. Haydon was called in, and attended her up to August 2, when he ordered her removal to the Infirmary, where she died. Dr. Haydon was suspicious of an irritant poison having been taken for producing abortion, and this suspicion was supported by another witness (deceased's aunt), who stated that eight or nine weeks ago deceased pointed out a shop as that where she got "the stuff" she took. She mentioned the medicine she was taking, and witness said, "I thought that was poison," to which deceased replied, "Well, it doesn't poison me." She also gave witness to understand the object with which she took the drug. Witness remarked that she would ruin her constitution. She replied, "I can't help it if I do." A week or two afterwards deceased told her she had had a miscarriage. An assistant to Messrs. Butler & Son, chemists, 125 Church Gate, said that in the ordinary course of business they often sold diachylon in the lump. It was used for wounds, and also for making "drawing" plasters. He had never heard of it being used for the purpose of procuring abortion. Mr. Lewis Ough, F.C.S., analyst and laboratory manager for Messrs. J. Richardson & Son, gave evidence as to the contents of diachylon, and also its effect on the system. Dr. P. Paget, house physician at the Infirmary, detailed the result of a *post-mortem* examination, and said that he found plenty of evidence of lead-poisoning. The appearances were consistent with deceased having taken diachylon. The Coroner, in summing up, said that they had no direct evidence of the deceased having taken diachylon, but they had the very important statement made by deceased herself to her aunt that she was in the habit of taking it. The jury, acting upon the Coroner's advice, returned a verdict of *felo-de-se*.

The Drug-trade at Southampton.

Trade in Southampton is, says a correspondent there, in a poor way. About three months ago, Mr. James Douglas, of East Street, sold his stock and fixtures, and removed to London, and the shop is now a fish-shop, after being open as a chemist's for twenty years. Mr. John Bienvonn's business in St. Mary's Street, another old-established concern (of between twenty-five and thirty years), is to be disposed of. These two were the nearest chemists to one another. They say that it is the "sixpenny doctors" who have spoiled them, of whom there are five. The "officers of health" have during the past month been busy, having bought samples of seidlitz powders, citric acid, and cream of tartar, but in all cases the drugs have been "A 1." Visitors from Somerset House have also been going about on the look-out for medicine-stamps omitted, &c.

Strychnine-poisoning.

A mysterious death from strychnine-poisoning took place at Gainsborough on Tuesday evening, when a man named Morley died in terrible agony. The deceased had gone into a public house with a fishmonger named Morgan and a woman named Booth. Morley ordered some ginger-beer, the woman left, and shortly afterwards Morley was taken suddenly ill with violent paroxysms, and accused Morgan of having given him a white powder. Drs. Marvin and Leader were quickly on the spot, and administered an antidote. Morley repeated his accusation against Morgan, and died within half an hour of the seizure. The corpse presented all the appearances of poisoning by strychnine, the muscles being rigid. A portion of white powder was picked up in a paper on the floor, and a whitish sediment in the bottom of a tumbler on the counter was taken possession of by the police. Morgan is under arrest.

Arsenic Instead of "Pop Powder."

On Tuesday last an inquest was held at Oldbury, touching the deaths of Hannah Debney, 3, and Walter Harold 6, who died last week from the effects of poisoning. On Friday of last week the children, with others, were playing in Debney's house. One of them obtained a quantity of white powder, which had been placed upon a shelf by Mrs. Debney. Under the impression that the powder was what is known in the district as "pop powder," the youngsters mixed it with water in a jug, and each child drank some. Immediately all became seriously ill. The parents of the children thought they were suffering from sunstroke, and medical assistance was not obtained until a few hours later, when three of them were unconscious, and all of them in a state of collapse. The powder was a mixture used in the manufacture of glass, and had been given to Mrs. Debney by a workman employed at a neighbouring glassworks, for the purpose of killing mice. Dr. Buttery, who made the *post-mortem* examination, said he found traces of arsenic in each child's stomach. Death was due to poisoning by arsenic. The jury returned a verdict of accidental poisoning, and they requested the Coroner to caution the mother to be more careful in dealing with poison in future.

Risks of the Chemical-trade.

An inquest was opened on August 12 touching the deaths of the two men, Henry Stone (42) and Dominick Kelly (33), who lost their lives on the previous day by the falling of a vitriol-chamber at Hutchinson's works of the United Alkali Company. Evidence of identification was given, and the inquest adjourned. We hear later that another death has occurred in connection with the accident, a man named Routledge having succumbed to his injuries.

Carbolic acid Poisonings.

On Saturday of last week a woman named Sarah Richards, aged 62, the wife of a market gardener, died from the effects of carbolic acid. Mrs. Richards had been ill and depressed. A verdict of suicide whilst in an unsound state of mind was returned.—On Tuesday of last week a young woman named Mary Ellen Taylor, of Ellison Street, Liverpool, was found in an unconscious condition in the road at Sangball Massie, near Birkenhead. She was at once conveyed to the hospital, where she died later in the day, the cause of death being carbolic-acid poisoning. The deceased's mother at the

inquest said that her daughter had lately been keeping company with a young man who had been talking of enlisting in the army, but whether this had anything to do with her sad end did not transpire. A verdict of suicide by carbolic-acid poisoning was returned.—On Saturday of last week a girl named Betsy Cottrill, 18, in domestic service at Liverpool, took carbolic acid and died notwithstanding medical assistance called in. No reason could be assigned for the rash act.

Irish News.

Pharmaceutical Society of Ireland.

Quarterly Registered Druggists' examinations will be held next month as follows:—At Dublin on the 1st, at Belfast on or about the 6th (if twelve apply). All applications should be lodged with the Registrar, 67 Lower Mount Street, Dublin, by Monday morning, August 22, at latest.

The New Examiner.

The Lord Lieutenant and Privy Council in Ireland have signified their approval of the appointment of Mr. Thomas William Robinson, M.P.S.I., to be an examiner to conduct examinations for the purposes of the Pharmacy Act (Ireland), 1875, in place of Mr. John Evans, M.P.S.I., whose term of office had expired.

Tartar Emetic for Tartaric Acid.

The Rev. Dr. Irwin, residing at the Manse, Castlerock, Coleraine, and his family had a narrow escape last week. The doctor sent to a shop in the neighbourhood for some tartaric acid to make a drink with. Tartar emetic was supplied in error. The beverage was made, and all the family took some, and all became very ill. Happily, no fatal results have ensued.

A Purchaser Found.

The business of Mr. Charles Johnston, chemist, Upper Sackville Street, Dublin, has been disposed of by the Court of Bankruptcy to Mr. Wm. H. Griffin, pharmaceutical chemist, of Britain Street, Dublin, for the sum of 1,000/. The rent of the premises, together with taxes, amounts to 140/. per annum, and the lease extends for a period of nine years. Mr. Griffin also possesses an establishment within a couple of hundred yards of the one he has now purchased.

A Draught of Liquor Fowleri.

An elderly lady named Woodhouse, of Cork, who had been in the habit of using arsenic medicinally, drank the contents of a phial of solution of arsenic a few days since, and died. At the inquest Mr. R. Sumner, chemist, Cork, said he had dispensed the arsenic on the prescription of Dr. Townsend. The bottle contained 1½ oz. of Fowler's solution. A verdict of arsenical poisoning while insane was returned.

Death of Mr. Doran, M.P.S.I.

We regret to record the death of Mr. Alex. E. Doran, M.P.S.I., of Bray, co. Wicklow, one of the oldest members of the Pharmaceutical Council. Mr. Doran had been in failing health for some time past and has been unable to attend the meetings of the Council, in which he always took a deep interest. Mr. Doran's establishment at Bray is one of the best and highest-class medical halls in that fashionable seaside resort.

"Apothecaries."

Sir Robt. Jackson, M.D., and Dr. Furlong, of Sandycove, co. Dublin, have been elected as members of the Board and Court of the Apothecaries' Hall of Ireland. The emoluments of the office amount to about 30% per annum to each member, in addition to the large percentage yielded by shares.

Scottish News

Aberdeen.

Messrs. Broomhead, Clark, J. Cruickshank, Johnston, J. Paterson, Ritchie, and Strachan, are to attend the approach-

ing Conference meetings as delegates from the Aberdeen and North of Scotland Society of Chemists and Druggists.

The Excise have again been making a raid on the trade here. On this occasion they have devoted their attention to the purchase of unstamped proprietaries. It is reported they have been successful in landing as many as eight, some on as many as four counts. A few have elected to pay a demand of 21s. rather than appear.

French Pharmaceutical News.

(From our Paris Correspondent.)

THE FLY PEST.—M. Carles, a Bordeaux pharmacist, recommends for the abatement of the fly nuisance a liquid composed of $\frac{1}{3}$ methylated alcohol and $\frac{2}{3}$ water, in which is dissolved 80 grammes of carbolic acid per litre. Sprinkle the places where the flies congregate with this mixture during several days. This will kill the majority of the insects and drive away the rest. Carefully remove any excretions, &c., that may serve to attract other flies.

A MIDNIGHT EXPLOSION of a carboy of sulphide of carbon occurred at the laboratory of M. Heimbach, pharmacist, 8 Rue Pierre Charron, last Friday, setting fire to a portion of the premises. Jules Mechaud, a young man of 20, in the pharmacist's employ, ran to extinguish the gas, which might help to spread the fire, but fell choked by the fumes. He was, however, rescued, and the fire was got under before any serious damage was done.

A VICTIM OF THE ATHLETIC CRAZE.—The recent Paris-Belfort walking-match organised by a leading French newspaper has created a craze for pedestrian efforts, which, however laudable in themselves, are unfitted for southern climes in the dog days. The sad death of a young pharmacien at one of these walking-matches is reported from Bayonne. He was 27 years of age, and did two or three miles at a sharp pace when he fell in a faint on the grass still wet with the morning dew. Not coming to himself, he lay so long on the wet grass that the cold struck him internally, and medical skill came too late to save him.

HONOURS FOR A VETERAN.—An interesting and somewhat uncommon event marked the recent final public examination of students at the Nancy Faculty of Medicine. The youngest primary student advanced with befitting gravity to present a magnificent beribboned bouquet to an elderly gentleman who had successfully "maintained his essay" and satisfied his examiners. This "senior student," as the inscription on the ribbon termed him, was M. Charles Vouillemin, pharmacist, of Bourmont, who is mayor of his native town and a member of the Hygienic Council of his department. His fifty-nine years' have not deterred him from adding a doctor's degree to his many other titles to the respect and esteem of his fellow citizens.

PHYLOXERA IN THE CHAMPAGNE DISTRICT.—Although many exaggerated reports have been spread, it would seem unhappily beyond doubt that certain cases of phylloxera have broken out in Champagne. Government officials and chemists vie with each other in stamping out the scourge from the vineyards of Reims, Epernay, Ay, &c. Once the presence of the insect is proved, Dr. Bandin and his "Phylloxera Squad" are quickly on the alert. The plants are hacked away to the level of the ground and the roots are destroyed by sulphide of carbon. On Saturday the indefatigable doctor was at Hautvillers, and held out hopes for the success of his endeavours to the "Committee of Defence" of the Champagne district.

A DANGEROUS SPECIALITY FOR THE HAIR.—At the last meeting of the Council of Hygiene of the Seine Department, M. Bonrgoin presented a report concerning the use and sale of a hair-restorer prepared by a Paris coiffeur. This speciality is sold in the form of a rose-coloured liquid, having a very strong odour of essence of bitter almonds. An analysis made by a chemist at the Municipal Laboratory showed that the preparation contained a proportion of 27 centigrammes of prussic acid per litre. The coiffeur recommended that the liquid should be rubbed in with

pumice-stone! After reviewing the facts of the case, the Council decided that the sale of the speciality should be prohibited as dangerous and likely to cause serious accidents.

SERIOUS CHEMICAL EXPLOSION.—On Tuesday morning last a serious explosion occurred on the premises occupied by A. Billault, chemical manufacturer, at the corner of the Place and Rue de la Sorbonne. The catastrophe was first announced by a laboratory assistant, Paul Delune, appearing at the top of the staircase which leads to the cellars, enveloped in flames. Another assistant, named Hedde, rushed to his aid, and tried to stifle in his arms the fire that was burning his colleague. Continued detonations were heard in the cellar, and an immense column of fire soon filled the interior courtyard of the house, and rose as high as the third storey. The explosion was caused by the bursting of a carboy of alcohol which Delune was manipulating, being lighted in his work by a small spirit-lamp. He now lies in a very precarious state at the Hôtel Dieu Hospital. Hedde has his right hand badly burned.

ANOTHER PASSIONATE CRIME, to use the accepted expression of French journalists, is reported from the sunny South, in which deadly drugs played a salient part. A young married lady of Sarason, Mme. Veran, arrived at the Hôtel du Louvre, Avignon, at 8 A.M. last Wednesday morning, engaged a room, and sent an unsigned letter to Mme. Rey, her cousin, asking her to call. The latter fell into the trap. An unwitnessed scene took place, when cries drew the waiters to the apartment. Letters were found scattered on the floor. Mme. Rey was seen to be blinded with vitriol, and Mme. Veran was unconscious, with an empty bottle, which had contained some 10 grammes of laudanum, in her hand. M. Boyac, pharmacist, endeavoured, unsuccessfully, to administer an antidote, and the unhappy victim of her own fit of jealousy lies at the hospital in a precarious state. Her cousin's condition is also desperate. The affair is as yet enveloped in mystery, but official inquiries have been instituted.

Foreign and Colonial News.

A FILTER EXHIBITION is to be held at Avellino, in Italy, on September 25. The filters are to be confined to those adapted for the filtration of wines and musts.

SUGAR OF MILK IN GERMANY.—A large sugar-of-milk factory is being erected at Schwiebus, in Germany. Hitherto the Germans have bought the bulk of their requirements in Switzerland.

THE PROJECTED BERLIN EXHIBITION.—There is to be no International Exhibition in Berlin. The wholesale dealers and middlemen generally offered strong opposition. Most of the local Legislatures of the German States have pronounced against it, and now the Emperor has squelched the project by his veto.

WANT TO GO TO CHURCH—American assistants at Richmond and Manchester, &c., are also moving in the matter of hours of labour. They held a meeting on July 18, and unanimously passed a resolution asking their masters to keep open only two hours on Sunday mornings and two in the evenings, so as to allow the opportunity to attend church. It is thought that the request will be granted.

CO-OPERATIVE PHARMACY IN SWITZERLAND.—According to the *Pharmaceutische Post* the Société des Pharmacies Co-operatives in Geneva has just published the results of its business transactions during the first eight months of its existence. The sales amounted to 13 202*fr.* (9347*fr.* to the public and 3 855*fr.* to members), and the net profit to 943 50*fr.*, which are to be distributed among the thirty-eight sick-funds who form the Society.

DISCOVERY AND PHARMACY.—The quatercentenary of the discovery of America has yielded a bounteous crop of congress and conference papers at the meetings of various societies. Pharmacy is to have its share of these, Dr. Hartwich, of Brunswick, President of the German Pharmacopœia Commission, having announced his intention to read

a paper on "Pharmacognosy Notes from the Discovery of America," at the meeting of the German Apotheker-Verein.

AMERICAN HOP BITTERS COMPANY.—The Rochester *Post Express* reports on July 14 that an order was filed in the county clerk's office that day, dissolving the Hop Bitters Manufacturing Company. Asa T. Soule made his fortune out of the medicine, and last March some of his family applied for a voluntary dissolution of the corporation. The report of the referees showed that the receipts of the company have not, for the last five years, been more than from \$5,000 to \$7,000—not enough to pay the salaries at one time. Asa T. Soule, as president of the company, drew a salary of \$15,000 a year, and Wilson Soule a salary of \$5,000 as secretary. The assets now are not more than \$2,000, and the liabilities, about \$40,000, are entirely to the Soule family. The sales of hop bitters had fallen off so that it did not pay to run the concern. The manufacture of the bitters has been discontinued for some time.

A TEA-MUSEUM FOR RUSSIA.—St. Petersburg is to have a tea-museum, in which everything connected with the tea-industry, from young tea-shrubs to the various processes of packing tea for retail and the tea-preparing utensils in use among all nations, is to be shown. A large part of the requisites of the museum is already on the road from Kiachta, the Siberian frontier station of the principal overland route to China. In connection with this announcement it may be mentioned that Professor of Pharmacy Tichomiroff, of Moscow University, has recently returned from a semi-official mission to India and China, undertaken with the special object of gathering information concerning the tea-industry in those countries. The Professor, since his return, has been delivering a series of public lectures. These are now appearing in print in the *Pharmaceutische Zeitschrift für Russland*, and are chiefly remarkable for their violent Anglophobia.

INOCULATION AGAINST CHOLERA.—The *Deutsche Medicinische Wochenschrift* contains particulars of the result of a series of experiments in inoculation against cholera which have recently been made at the Berlin Institute for Infectious Diseases. They were initiated by Drs. Kitasato (a Japanese student of some repute), Brieger, and Wassermann. After Kitasato's return to Japan last year, his two colleagues continued the investigations with the assistance of Professor Koch. The experiments have been made exclusively upon guinea-pigs. The animals were inoculated with diluted cultures of *Cholera vibrios*, and it was proved that they were thereby rendered immune from disease upon subsequent introduction of the cholera-bacillus. The inoculated animals were able to stand without injury several times the quantity of cultivated bacilli to which uninoculated guinea-pigs succumbed. The inoculating substance was prepared by breeding the cholera-bacillus in an aqueous solution of cellular-tissue, especially thymus-glands.

UNITED STATES TRADE-MARKS.—Registered August 2 "Linonine," for a substitute for cod-liver oil, by Danbury Pharmacal Association; "Phosforine" on a label, for a remedy for general debility, &c., by Richard Hudnut, New York; "Wonder Oil" under figure of a dog, for a topical remedy, by Christian Hesse, Minorik, Ill.; figure of a balloon, for perfumery, by Bean & Vail Brothers, Philadelphia; "Almadino," for toilet preparations, by Joseph S. Lurie, Kansas City; "Tonka'alpa," for cleaning and disinfecting soap, by Henry C. Stewart, Cincinnati, Ohio; "Cinch," for gonorrhœa-remedy, by W. L. Cochran, Burlington, Iowa; "Tiko," for rheumatism-remedy, by Purinton Medicine Company, Detroit, Mich.; "Enterprise," for druggists', &c., hardware, by the Enterprise Manufacturing Company of Pennsylvania, Philadelphia; figure of a crowing rooster, for a liquid tonic, by M. J. Olsen, Des Moines, Iowa; "Menth-Iod-Gold" upon a square, for adhesive plasters, by Alva H. Keller, Sioux Falls, S.D.; "Nervo-Matte," for medicinal beverages, &c., by Fred H. Perkins, Shrewsbury, Mass.

"CHOLERA-CHESTS" AND CARBOLIC ACID IN RUSSIA.—The Russian provincial pharmacist has to pay 34*rs.* per pood for 50-per-cent. crude carbolic acid to his Moscow wholesale house. By the time his acid is ready for sale in his shop, however, it costs him 66*rs.* per pood. The Government compels him to sell this same acid at 38*rs.* per pood, and punishes him if he refuses to supply it

at that price. But if the pharmacist is a loser on carbolic transactions, he recoups himself to some extent by the sale of "anti-cholera medicine-chests," which he can hardly supply fast enough to satisfy the demand. These "chests" are all uniform and contain the following sixteen ingredients: peppermint-leaves, compound spirit of ether, essence of peppermint, tincture of nux vomica, simple tincture of opium, ethereal tincture of valerian, castor oil, spirit of camphor, powdered camphor and saccharin (in 8-grain doses), powdered calomel (in 15-grain doses), tannin (in 30-grain doses), subnitrate of bismuth in powder (in 30-grain doses), mustard-seeds, powdered ipecac., hydrochloric acid, and liquor ferri perchlor. fort.

THE WORD "VASELINE" IN GERMANY.—The claims of the Chesebrough Manufacturing Company with regard to the word "Vaseline" in this country are well known. In Germany it has been the habit for many years to manufacture and sell petroleum jellies of various degrees of excellence under the name of "Vaseline," and hitherto no proceedings appear to have been taken against the manufacturers or sellers of these products. Now, however, the Chesebrough Company, in their new German price-lists call particular attention to the fact that the word "Vaseline" is their property, and that infringements on their rights will be prosecuted under the German Trade-marks Act. The *Pharmaceutische Zeitung*, in reporting this fact, appears to question the company's right to the word, although it admits that the manufacturers of petroleum jellies are in the habit of using the word constantly. It suggests that the German product is at least as good as the Chesebrough vaseline, and it further points out that the German Pharmacopoeia as far back as 1882 gave the word vaseline as a synonym for unguentum paraffini. It further states that the German Trade-marks Law only protects marks and not words, and altogether indicates that the chances of the company establishing their rights in Germany are not very hopeful.

HOW PLATINUM IS MINED IN RUSSIA.—An American gentleman (who travelled, by-the-way, with a silk miniature Stars and Stripes in his pocket to be "hoisted" on July 4, wherever he might be) has just returned to his native State from the Urals, and furnishes a Boston paper with some particulars about the way platinum is obtained in Russia. He found that the stories about the scarcity of platinum circulated about two years ago were false, and that the increase in price was due to a combination between the English handlers of the ore and a broker in St. Petersburg, who, together, managed to control the production and get up a corner. The price went up to \$19 an ounce, but could not be maintained because a number of new mines were quickly opened, and the production was largely increased. There are now at least forty mines along the course of a river in the distance of fifty or sixty miles. The ore-grains are obtained from their native sand by crude washings in tubs, provided with dashers like butter-churners. It is primitive work at the best, although some of the mine-owners employ steam-power to agitate the dashers, and nothing but the extraordinary weight of the platinum prevents a serious loss in washing. After the grains are obtained they contain from 50 to 70 per cent. of pure aluminium, combined with iron, gold, osmium, iridium, and other metals of this group. The sand-ore undergoes seven operations before the platinum is technically pure. This purification, however, is not performed at the mines, but at a works in Germany, where the work is superintended by a trained chemist and assayer, who acts also as bookkeeper, and receives an equivalent of a guinea a week for his work.

RUSSIAN PHARMACISTS AND THE CHOLERA.—Apotheker Berthold Hermann, of Sarepta, in Russia, who has the misfortune to be located in the centre of the cholera district, relates in the *Russian Pharmaceutical Journal* particulars of the murder of his neighbour and colleague, C. F. Jansen, of Sredni Achtubinskoia, in the Government of Astrakhan. Jansen appears to have been a German by birth, and after completing his studies, settled as "rural apotheker" in the village where he has just been murdered, marrying a Russian girl, and embracing the Orthodox faith. When the cholera riots commenced, a band of some thirty ruffians broke into the shop of the unoffending pharmacist, whom, in the presence of his wife and child, they seized and tortured in the most abominable fashion. They tore out one of his

eyes and filled the cavity with carbolic acid, they partly flayed him alive, they broke all the bones in his body, sacked the shop, smashed everything not portable, and left the dying apotheker to breathe his last among the wreckage. Two local policemen, who endeavoured to stop the mob, were also murdered. In the town of Saratof, a comparatively large place, one of the two pharmacies was sacked by the mob; the other was saved in the nick of time by a strong military force. The cause of the ill-feeling against pharmacists appears to be that the latter have been ordered by the Government to stock and supply certain disinfectants against the use of which there is a strong popular aversion. No wonder that Apotheker Hermann describes himself as feeling like a soldier upon duty at a "lost outpost." The demand for disinfectants is of no advantage to him and his colleagues, as the Governor has preremptorily commanded them to supply all such remedies at 25 per cent. below cost price.

MODERN PHARMACO-THERAPY.—The first instalment of what promises to be a very interesting series of articles on modern pharmaco-therapy appears in the last number of the *Pharmaceutische Zeitung*. It is based upon a paper read by Dr. Julius Weiss before the Vienna Medical Club. The author commences by pointing out that formerly pharmacists only were in the habit of noticing remedies and bringing them to the notice of the medical profession, and that the manufacture of chemical remedies on a large scale in factories, many of which have nothing whatever to do with pharmacy, is a development of modern times. The usual process, as followed now, is for the factory to send specimens of its new remedy to some medical authority or other, who tests it, and usually reports in enthusiastic terms upon its efficacy. Other medical men, anxious to be up to date, then commence to experiment with the drug, and the result is a long series of papers, all extolling the remedy. Gradually, however, another phase in the progress of the remedy is reached, and voices are heard which decry the value of the medicine, and point out that in several cases the excellent results first reported have not been observed, but that, on the contrary, the remedy has been proved to possess many undesirable qualities, and in the end the downfall of the preparation is almost as rapid as its rise. Such has been, taken on the whole, the history of recent medical antipyretics, all of which have now become among medical men objects of silent disdain. The last antipyretic given to the world is phenocoll. This drug was the result of efforts to obtain from acetanilide and pheacetin, which have the disadvantage of being very insoluble, a body which, without lessening anything in antipyretic value, would be easily soluble. It is only a short time ago since various authorities spoke in the very highest terms of phenocoll as an antifebrile, anti-rheumatic, and anti-neuralgic, but it now appears that the usual feeling of reversion has set in with the publication of an exceedingly unfavourable estimate of the remedy by Eichhorst, of Zurich, who states that given in the prescribed doses it does actually reduce the temperature, but that most of the patients afterwards perspire freely, and that some of them are seized with cold shivers, after which their temperature again rises. In the beginning of last year it appeared as if modern medicine were to find in extracts of bacteria the solution of all its difficulties, but already, after painful experience, this illusion has been shattered, and we are again thrown back upon the doctrine of internal medicinal antiseptics. But here, again, the efficacy of the most vaunted preparations is strongly denied by authorities equal in reputation with those who recommended them. The author of the article then passes on to review the separate history of a large number of modern remedies, and places upon record the principal advantages and disadvantages which they have been found to possess. His conclusion appears to be that most of these remedies have had their time, and that the reaction against their employment, which has lately gathered considerable strength, is destined to grow still further in future.

LINSEED OIL is not a bad thing therapeutically. It is as good as cod-liver oil for phthisis, says the *prescription*, and when properly emulsified and flavoured, it can be taken readily, and is assimilated quickly.

Trade Notes.

MR. E. R. SMITH, chemist and druggist, of Eccleshall, has disposed of his business to Mr. F. W. Goodman, who was for many years with Messrs. Corbyn & Co., of London.

MESSRS. LYNCH & Co. (LIMITED) ask us to state that the capital of the company into which they have converted their business has been all subscribed privately, and that no shares are offered to the public.

MR. THOMAS CHRISTY, of Lime Street, has just received from Paris samples of vanilla-pods, imported "from a place in the French colonies," in alcohol. He has shown us some of the beans, which are of fine appearance and good aroma. They are, of course, partly exhausted, and we suppose that it is the intention to sell them along with the spirit in which they have been sent over. It is claimed that by placing the pods in alcohol when freshly gathered a much more fragrant tincture is obtained than by exhausting the cured beans purchased in Europe.

THE LIQUOR CARNIS COMPANY (LIMITED), of 50 Holborn Viaduct, E.C., have sent us a copy of a very striking show-card which they are issuing. This shows in facsimile bottles of Caffyn's liquor carnis and malto-carnis, and between them the series of eight test-tubes which demonstrate the superior albuminoid value of the liquor. As a piece of lithography the card is excellent, and as the company's "first attempt" at advertising in this manner it deserves to bring in good returns. They tell us that if any subscribers of THE CHEMIST AND DRUGGIST wish one of the cards they have only to ask for it.

WE have received a prospectus of a company styling itself Gordon, Murray & Co. (Limited). The capital of the company is named at 10,000*l.*, and we and the rest of the public are invited to subscribe 4,500*l.* of this. The "highly successful" business, shares in which are thus offered to us, appears to consist in a number of remedies comprised in and known as the "Birley Treatment," "together with the goodwill of the said business, the recipes, trade-marks, copyrights, plants, machinery, fixtures, fittings, and stock-in-trade thereof, and together also with the lease of the premises No. 10 Adam Street, Strand, aforesaid, which premises are admirably suited for the company's requirements and are held for an unexpired term of eighteen years on very advantageous terms." The gentleman who, according to the prospectus, has been "so long known in connection with the business as Mr. Edgar Birley," appears to be a Mr. E. J. Rowbotham. "The directors are glad to be able to state that that gentleman has consented to act as managing director for at least five years." There is a probability, it appears, of a profit of 25½ per cent. upon the whole nominal capital of the company. This calculation is based upon a report professedly signed by "R. H. Sloley & Co., chartered accountants 3 King Street, London, E.C." R. H. Sloley & Co. say that the accounts of the business for 1889, 1890, and 1891 have been laid before them, and "from these it appears that the net profits, after allowing for wear and tear of plant, depreciation of lease and expense of advertising, but not charging interest on capital, have been at the rate of 22½ per cent. per annum of the average gross business, and at the rate of 75 per cent. on the present working capital." Along with the prospectus we have a pamphlet describing the Birley treatment, and a form to fill up on which we may describe all the symptoms of our case, say how much and how often we take stimulants and smoke, give our present weight, and so on. We observe that "W. B. Mason, Esq., Lifton House, Leeds, managing director of Taylor's Drug Company (Limited), London, Leeds, Bradford, &c.," is the chairman of this company. We beg to inform Mr. Mason that we cannot judge of the value of the company from the prospectus which bears his name. Will he tell us what was the actual capital of the business on which 75 per cent. profit has been realised? We want to know that before we invest; and before we send in particulars of our diseases we should like to know who is the person who is going to advise us in respect thereto, and what are his qualifications.

MARRIAGES.

[Notices of Marriages and Deaths are inserted free if sent with proper authentication.]

GREEN—AINSWORTH.—On August 10, at Homchurch, Essex, by the Rev. Robt. Johnson, Joseph H. B. Green, chemist and druggist, Wood Street, Swindon, to Lottie, second daughter of Henry Ainsworth.

HUTTON—JORDAN.—On August 10, at Lillington parish church, by the Rev. F. Conway, Harry Hutton, pharmaceutical chemist, Leamington, to Ellen, eldest daughter of Joseph Jordan, Blakedown, Leamington.

TURNER—RICHARDSON.—On August 17, at the Parish Church, Alford, by the Rev. C. S. Dawe, assisted by the Rev. W. Blin Stoye, Charles Turner, F.C.S., of Manchester, to Edith, youngest daughter of E. J. Richardson, veterinary surgeon, Alford.

DEATHS.

BELL.—On July 23, James Bell, chemist and druggist, Haltwhistle. Aged 52.

BURNABY.—On July 16, Francis Burnaby, pharmaceutical chemist, Manchester. Aged 53.

GEDDES.—At Seafeld House, Bridge-of-Allan, on August 14 George, eldest son of the late George Geddes, chemist, Aberchirder. Aged 17½ years.

JAAP.—On August 15, suddenly, Mr. John Jaap, pharmaceutical chemist, Buchanan Street, Glasgow. The deceased gentleman was in the best of health until a few days before his death, when he caught a chill at a friend's funeral. On Saturday he was in the city at business, but was taken unwell in the shop, and had to be driven to his residence at 23 Oakfield Terrace, Hillhead. A complication of pleurisy and inflammation of the lungs supervened, which terminated fatally within forty-eight hours. Mr. Jaap was apprenticed in Edinburgh, and was for several years principal assistant to Mr. John Mackay in that city. Upwards of forty years ago he went from Edinburgh to Glasgow, and commenced business on his own account in the shop in Buchanan Street. There he had remained ever since, conducting a large retail business, and in recent years an extensive wholesale trade. Of a retiring and quiet disposition, Mr. Jaap had all along declined to take any part in public affairs. He was on more than one occasion offered nomination for the Council of the Pharmaceutical Society, but always refused. He was a staunch supporter of the Established Kirk of Scotland, and was a Conservative in politics. He was about 65 years of age, and leaves a widow, but no family.

MATTHEWS.—On July 23, Charles Matthews, chemist and druggist, Middlesbrough. Aged 52.

PITTS.—On July 23, R. P. Pitts, chemist and druggist, Norwich.

REID.—At Cairnmore House, Nottingham, on August 5, James Reid, L.R.C.P., L.R.C.S., chemist and druggist, late of Edinburgh and Aberdovey. The deceased, after passing the Minor examination in 1880, opened a pharmacy in St. Leonard Street, Edinburgh, and commenced medical studies at the University there, taking the double qualification in 1887. While at the University he took a prominent place in the prize-list, being medallist and prizeman in midwifery, chemistry, practical chemistry, and practical anatomy. After practising for a little in Edinburgh, he went to Aberdovey, and afterwards to Nottingham. For some time he was resident medical officer of the Montgomery Infirmary, and was also surgeon for Cwmebol Slate Quarry.

WILLIAMS.—On July 20, John Williams, chemist and druggist, Sheffield. Aged 56.

GUM ACACIA IN JAVA.—Dr. de Vrij, the Dutch pharmacist, calls attention to the fact that the *Acacia dealbata*, a native of Australia, from the stem of which exudes an excellently soluble gum, grows in profusion in the Java mountains, and states that some thirty-five years ago he was in the habit of using this gum regularly for pharmaceutical purposes. It might be worth while to collect and export it.

Personalities.

MR. J. CLOUGH, chemist, of Northwich, has been made a county magistrate for Cheshire.

MR. WILLIAM ARTHUR WILKINSON, son of Mr. Wm. Wilkinson, chemist, Colne, has taken the M.B. and Ch.B. degrees at Victoria University, Manchester. Dr. Wilkinson passed the Preliminary examination of the Pharmaceutical Society at the age of 13 years.

THE *Yarmouth Independent* of August 13 gives an interesting account of a cycling trip from Yarmouth to Paris and back, made by Mr. George Waller, son of a homœopathic chemist in that town. He started on July 18, and was back again on July 30. He computes that he covered 700 miles of road.

ON the occasion of Mr. Charles Turner's marriage, the students of the Manchester College of Pharmacy presented to him and Mrs. Turner a handsome case of table cutlery and silver, with an illuminated address, including, besides the names of the present students, ten pharmaceutical chemists and twenty-five chemists and druggists who joined with them in this testimony of esteem.

Legal Report.

ACTION BY THE APOTHECARIES' SOCIETY.—THE SOCIETY DEFEATED.

AT the Morpeth County Court last week, before his Honour Judge Digby Seymour, the Master, Wardens, and Society of Apothecaries sued J. Taylor Hancock, Amble, to recover the sum of 20*l.* for that before the commencement of this action—to wit, between February 4 and 19, 1892, inclusive—the defendant (he not being a duly qualified apothecary) did act and practise as an apothecary at Amble, attending and advising, and furnishing and supplying medicines to and for the use of one Hugh Armstrong.

Mr. Strachan appeared for the plaintiffs and Mr. Joel for the defendant.

Mr. Strachan, in opening the case, said the proof that he had a certificate lay upon the defendant.

The Judge : Is that so ?

Mr. Strachan : Yes ; it has been decided. In February of this year he attended the child for about a fortnight, prescribed medicines, and supplied medicines, which is an offence under the Apothecaries Act. And inasmuch as he is not a person authorised to do that sort of thing it is felt by the Company of Apothecaries that proceedings must be taken against unauthorised persons doing these things. Although they may be thoroughly qualified—that is not the question—if it were once allowed it opens the door to people who have no knowledge whatever doing this sort of thing. Therefore the Company of Apothecaries feel they are bound to take these proceedings. I will prove that he did attend and did furnish medicines for that child for a period of about a fortnight.

The Judge : That won't be enough.

Mr. Strachan : Surely, your Honour.

The Judge : Certainly not ; you might make me responsible for that. Did he receive any fee ?

Mr. Strachan : That is not necessary. It has been held over and over again that it is not necessary to show he has received a fee.

The Judge : I have dispensed.

Mr. Joel : So has my friend.

Mr. Strachan : I was fully qualified at the time. I was serving my apprenticeship.

Mr. Joel : So is my client.

The Judge : If you prove he dispensed in the sense contemplated by the Act—

Mr. Strachan : He having a surgery and dispensing it from that place.

Mrs. Hugh Armstrong, the mother of the child, then gave evidence. She said her child died on February 19 last, aged 2½ years. He had been ill for about a fortnight before.

Dr. Forrest attended him. She never saw him. She saw Mr. Hancock, but she was not well part of the time.

The Judge : Who is Dr. Forrest ?—He is our doctor.

The Judge : Did he attend the child ?—I did not see him, but I was not well part of the time of my child's illness, and he might have been there and me not see him. I was in bed upstairs.

It appeared from a lengthy examination and cross-examination of this witness that Mr. Hancock had attended the child as the assistant of Dr. Forrest, who was the club doctor. She had not paid anything to Mr. Hancock.

That, said Mr. Strachan, after this witness had given her evidence, is my case.

The Judge : What is it ?

Mr. Joel : I submit there is no case.

The Judge : The case now is that the witness, being a member of a sick-club, is attended by the doctors in succession, first Dr. Carrie and then Dr. Forrest. The defendant, Mr. Hancock, who she swears was reputed to be and regarded by her as assistant to the surgeon of the club, calls and asks questions as to the child's suffering, looks at it, which may have been very probably to report to his principal the condition of the child. You (Mr. Strachan) don't produce any of the bottles supplied, you don't produce the plate ; all I have is that he is the assistant of the regular surgeon—a fully qualified member of the Apothecaries' Hall—who calls on the patient of his principal to ascertain certain facts, presumably to report the condition of the patient to the doctor. He does no more. There is no proof that he prepared medicine or supplied it or sold medicine or mixed medicine or prescribed medicine. How is he acting as an apothecary ?

Mr. Strachan : Suppose there was no Dr. Forrest for a moment.

The Judge : I cannot suppose that. You had better treat the case as it is.

Mr. Strachan : If he was an assistant to an apothecary the penalty would only be 5*l.*, and I could only recover that instead of 20*l.* But I must argue it in that way, supposing there was no Dr. Forrest, and supposing he were there simply attending this patient and medicine is sent from that surgery—

The Judge : You must not snap a verdict or snap a penalty. You bring that woman, who evidently is in bad health, and cannot give much evidence. If the great institution, the Apothecaries' Hall, wish to put the law in force, let them do it in a dignified manner, and not try and snap a verdict. I have no evidence that he held himself out to prescribe medicines or acted or served as an apothecary. I have evidence that there is a presumption that the real person who supplied the medicine was the doctor of the club in which the witness was insured, and which was kept back from the Court.

Mr. Strachan (warmly) : I beg your pardon ; we kept nothing back.

The Judge : Not you. The company ought to have found out.

Mr. Strachan : I must protest against your saying that we kept anything back.

The Judge : If that is your case I see no case. I find for the defendant.

Costs were allowed on the higher scale, Mr. Strachan protesting.

BANKRUPTCY REPORT.

Re JOSHUA JAMES THOMAS, High Street, Rhymney, Chemist.

THIS bankrupt came up for his public examination at the Tredegar Bankruptcy Court on Friday of last week, before Mr. Registrar Sheppard. Mr. W. Beddoe, solicitor, Merthyr, appeared for the debtor. In reply to the Official Receiver (Mr. W. L. Daniel), debtor stated that in November, 1891, he borrowed from a certain company a Bristol sum of 40*l.*, for which he was to pay interest at the rate of 20*l.* for twelve months. In February last he contracted a loan of 30*l.* with a money-lender at Cardiff. Of this sum, however, he only received 22*l.* or 23*l.* He undertook to pay the full amount, with 10*l.* interest, in monthly instalments of 5*l.*, making altogether 40*l.*, and he had already paid 15*l.*, leaving 25*l.* still due. The examination was declared closed.

PHOTOGRAPHIC NOTES.

AMIDOL AS A DEVELOPER.

IT was mentioned in these notes recently that under the name of amidol a new developer had been introduced, possessing the remarkable property of working independent of accelerators. Amidol is made by Mr. J. Hauff, of Feuerbach-Stuttgart, who has appointed Messrs. Fuerst Brothers, 17 Philpot Lane, E.C., his agents, and this circumstance has given us an opportunity of trying the developer. In our experiments we used Ilford plates of "ordinary" rapidity, which had been exposed under different conditions, and the developing-solution was made as follows:—

Amidol	20 grains
Crystallised sodium sulphite ..	200 "
Water	1,000 fl. grains

Dissolve.

One part of this solution is diluted with three parts of water before use. The first point to be noted is that development takes place with amazing rapidity—say, in as many seconds as it takes minutes with pyrogallol acid—so that if more than the high lights flash out when the negative is drenched with the developer, the addition of potassium bromide is necessary as a restrainer. But very little bromide is required—2 drops of a 1-in-10 solution in $1\frac{1}{2}$ oz. of the developer sufficing to delay the process for many minutes. The second point which may be noted is the certainty of getting a good picture from a negative taken under had conditions. For example, we had a few cathedral interiors; light the most dim religious possible. Pyrogallol and hydroquinone gave very poor pictures, only the best-lighted parts coming out at all well, but with amidol we obtained two excellent negatives in which the detail was brought out uniformly and clearly. Our results, altogether, are so good that we advise a fair trial of amidol. As a single-bottle developer it is obvious that it has great advantages. Note that neutral sodium sulphite should be used: the metaspulphite retards development unduly, and sufficient density is not obtainable with it.

STEREOSCOPIC PHOTOGRAPHY.

THERE is a growing interest being taken in this, the most beautiful section of photographic work. Nearly all the large firms making photographic apparatus are making a speciality of stereoscopic cameras. It is a very easy matter to convert an ordinary half-plate camera for stereoscopic work; the expense is chiefly in the lenses. It is, of course, imperative to have a pair of twin lenses: these may be purchased from 35s. upwards.

POPULARISING PHOTOGRAPHY LOCALLY.

LOCAL photographic competitions, prizes given for the best negatives taken with the "Clean Hands" developer, &c., will cost little, and not only popularise photography amongst a certain class, but bring business to the enterprising chemist.

DEVELOPERS.

MR. F. C. BEACH, of New York, has given much attention to the making-up of developers, and has just published the following formulæ:—

No. 1.

Pyrogallol (a commercial ounce) ..	437½ grs.
Sodium sulphite (crystals) ..	4 oz.
Warm distilled rain, or melted ice water.	5 "
Sulphurous acid (strong) ..	3½ "

Dissolve the sulphite in water; when cool add the sulphurous acid, and lastly the pyrogallol; a solution is formed equivalent to 48 grs. of pyro. to the ounce, every 10 minims representing 1 gr.

No. 2.

Carbonate of potash ..	480 grs.
Water ..	3 oz.

Equivalent to 20 grs. to 1 dr. of solution.

In practice a good developer is made by adding to 2 oz. of water $1\frac{1}{2}$ drachms of No. 1 and $\frac{1}{2}$ drachm of No. 2. More of No. 2 may be added for under-exposed plates.

PRINT-MOUNTING MACHINE.

MR. C. C. VEVERS, of 12 Market Street, Briggate, Leeds, has introduced a simple machine for mounting prints, which can be fastened to a table by means of clamps. The mountant is applied to the prints in the usual manner, a piece of blotting-paper is placed over the print, and it is then passed through the machine as in burnishing. The only precaution to be taken is to keep the rollers perfectly clean.

THE PHOTOGRAPHIC IMAGE UPON PORCELAIN.

THOSE who have time may, with comparatively small outlay, produce permanent photographs in enamel upon glass or porcelain by the process described by Dr. H. E. Gunther in *Photographic News*. To do this a transparency is at first made with high lights, showing plenty of detail combined with brilliancy. The solutions may, before being mixed, be kept in daylight, but when mixed it is necessary to keep them in a dark room. As a freshly-prepared mixture gives much better results than an old one, it is better to mix only sufficient for one or two days in summer, or eight days in winter. The solutions are as follows:—

No. 1.

Distilled water	35 fl. oz.
White sugar	5½ oz.
Gum arabic (powdered) ..	2 "

Shake well until all has been dissolved, and then add 500 grammes of saturated aqueous solution of borax.

No. 2.

Honey	7½ drachms.
Saturated solution of borax ..	5½ fl. oz.

No. 3.

Ammonium bichromate ..	7½ drachms
Distilled water	8½ fl. oz.

To prepare the sensitive composition, mix No. 1, 2 parts; No. 2, 1 part No. 3, 3 parts.

In hot weather a little more of solution No. 2 should be added. A plate of glass is thoroughly cleaned, and then coated with the sensitive mixture after the manner of collodion, the surplus solution being allowed to run off into a filter. After draining, the plate is placed on a piece of sheet iron, mounted at an angle of about 15°, and kept warm by a spirit-lamp placed underneath, and the plate dried. As soon as the surface has become clear and hard, it is ready for exposure. Into the printing-frame is placed the transparency, film side up, and on it the prepared sensitive plate, film side down; then the frame is closed and exposed for about twenty or thirty seconds in summer sunshine, or for about twenty or thirty minutes in dull light. The development of the plate should be done in a warm room. The plate is held with the left hand, and some of the enamel colour is sprinkled on it with the right hand, and worked round and about with a long-haired camel-hair pencil. The plate is then placed aside for about five minutes, and the moisture of the air allowed to act upon the film during this period. The dusting-on of the enamel pigment is repeated four times in all, at intervals of about two or three minutes. When the development is finished, the image ought to appear as finely modelled as the transparency. All non-adherent powder is now removed from the plate by means of a clean brush, care being taken that none of the already fixed enamel colour is removed. The plate is next coated with a collodion containing $1\frac{1}{2}$ oz. of pyroxylin to 34 fl. oz. of ether menstruum, to which about 25 drops of castor oil are added, and after the film has set, it is rubbed away from the edge of the plate so as to leave a clear border of about $\frac{1}{8}$ inch. The glass plate with the image is then placed in a dish containing a 2-per-cent. solution of caustic potash in water, and allowed to remain until the yellowish colour has entirely disappeared. The plate is then immersed in another dish containing clean water, and is after a few moments removed and placed upon blotting-paper. The water is then poured off and replaced by fresh. Placing the plate in this bath and gently manipulating the film with the fingers, it becomes quite easy to detach it. It is then caught, collodion side down, on the enamel tablet. The latter is laid on blotting-paper, picture side upwards, and allowed to dry. After being retouched, if necessary, the picture may be burnt-in in the usual manner in a muffle furnace.

PHARMACOPEIAL TINCTURES.

By E. H. FARR and R. WRIGHT, Pharmaceutical Chemists.

IN the issue of THE CHEMIST AND DRUGGIST for July 28, 1888, a postcard competition was inaugurated, and prizes were offered for the best suggestions as to subjects suitable for discussion at meetings of the British Pharmaceutical Conference. Among the subjects suggested by various competitors were the following:—

"How may tinctures be made without waste?"

"Is there any difference between tinctures made with powdered and coarsely-cut drugs, and between tinctures made by maceration and macero-percolation?"

"Can a ready and accurate method be devised for the estimation of alkaloids in tinctures?"

"Could not many of the tinctures prepared with proof spirit be as efficiently prepared with a weaker spirit, and by a different process?"

Subjects like the above are of considerable pharmaceutical importance, and it is not to be wondered that during the past few years such questions as those of tincture menstrua, processes, and standards should have received more attention at the hands of practical pharmacists than formerly was the case.

In January, 1889, and subsequently, a very valuable series of articles on the B.P. tinctures was published by Mr. F. W. Fletcher, in THE CHEMIST AND DRUGGIST. The articles dealt specially with the subjects of the determination of specific gravity, alcoholic strength, percentage of extractive, and the estimation of alkaloids, and were accompanied by tables of results. Our work upon the subject of tinctures was commenced in the autumn of 1887, and has been continued, so far as time and opportunity have allowed, up to the present time. The investigation was at first conducted quite independently, and the first papers were read at the Conference meeting held at Leeds in 1890.

The results obtained were in many instances very closely accordant, but several discrepancies were pointed out in the discussion on the papers, and it was felt desirable to carry the investigation further, and also to undertake the work conjointly.

The objects aimed at have been as follows:—

1. To ascertain whether the alcoholic strength of the menstruum ordered in the B.P. for the preparation of tinctures was in all cases the most suitable.

2. To devise accurate and reliable methods for the estimation of the alkaloids in alkaloidal tinctures, and to find the average alkaloidal strength of such tinctures.

3. To test the comparative value of alternative processes for the preparation of the tinctures.

The first part of the work is now almost completed. Notes on the tinctures of conium, colchicum, aconite, jaborandi, henbane, belladonna, and stramonium have already been published, and the following is a summary of the principal results hitherto obtained:—

it has so far advanced that we are now able to present the results in regard to

TINCTURE OF GELSEMIUM-ROOT.

Gelsemium-root was first submitted to systematic examination by Kollock, in 1855, and was found to contain an alkaloid, gelsemine, a yellow colouring-matter, two resins, a fixed oil, a volatile oil, gum, starch, albumen, pectic matter, gallic acid, and from 3 to 4 per cent. of mineral salts.

It has since been investigated by Maisch, Eberle, Wormley, Robbins, Sonnenschein, Dragendorff, Schwartz, Gerrard, and Thompson.

The fluorescent principle, gelseminic acid, was first isolated by Wormley, in 1870, and has since been studied by Robbins, Schwartz, and Dragendorff, who have concluded that it is identical with resculin, the glucoside of the horse-chestnut. This view has, however, been contested by Wormley.

The last-named investigator also obtained the alkaloid gelsemine, in a fairly pure condition, in the form of a very hard, brittle, transparent mass, yielding a powder almost or quite colourless.

In 1883 Gerrard succeeded in preparing a perfectly pure crystalline alkaloid, and also obtained several of its salts in a crystalline condition. The formula of the alkaloid is given as $C_{12}H_{11}NO_2$, and that of the hydrochlorate as $(C_{12}H_{11}NO_2)HCl$. In 1885 Thompson announced the discovery in gelsemium-root of a second alkaloid, which he named gelseminine. This was obtained from the mother-liquor from which the gelsemine had been removed, by crystallisation, in the form of the sparingly soluble hydrochlorate.

For the purpose of our work on the pharmacy of gelsemium-root, twelve samples of the drug were obtained from various sources, and after being reduced to No. 40 powder, a series of tinctures was made from each with menstrua of 80, 70, 60, 50, and 40 per cent. alcoholic strength. The process for the preparation of the tinctures was varied, six series being prepared strictly according to the B.P. process, and the remainder by that of continuous percolation.

In order to ascertain what process was best adapted for the estimation of the alkaloids, 300 c.c. of a standard tincture was prepared, and its estimation attempted by each of the following processes, the usual precautions being taken to prevent loss of alkaloid in washing with chloroform, &c.:—

Experiment I.—The tincture was evaporated until all spirit was driven off, the residual liquor allowed to cool, and acidified with dilute sulphuric acid. It was then filtered into a separating-funnel, and colouring-matter removed by means of chloroform. The solution was then rendered alkaline by the addition of ammonia in slight excess, and the alkaloids removed by agitation with three successive small portions of chloroform. The chloroformic solutions were mixed, the alkaloids recovered by shaking with successive small portions of acidulated water, the acid liquids mixed and made alkaline, the alkaloids again extracted by means of chloroform, the chloroformic solutions mixed and shaken with ammoniated water and, after separation, drawn off and

Tincture	Official Menstruum	Proposed Menstruum-Alcohol by Volume	Alkaloidal Content (Per Cent.)	Alkaloidal Standard Proposed (Per Cent.)	Process Recommended for Preparing the Tincture
Conium	Proof spirit=57 per cent. by volume ..	70 per cent.	·06 to ·16	·08	Continuous percolation
Colchicum	Proof spirit	50 per cent.	·064 to ·119	—	Continuous percolation
Aconite	Rectified spirit=90 per cent. by volume	70 per cent.	·045 to ·086	—	Continuous percolation
Jaborandi	Proof spirit	50 per cent.	·040 to ·152	·10	Continuous percolation
Hyoscyamus	Proof spirit	50 per cent.	·008 to ·015	·01	Macero-percolation or continuous percolation
Belladonna	Proof spirit	50 or 60 per cent.	·015 to ·045	·025	Macero-percolation or continuous percolation
Stramonium	Proof spirit	60 or 70 per cent.	·020 to ·034	·025	Macero-percolation or continuous percolation

The subject of standardisation will be dealt with subsequently; a standard has only been proposed in cases where the results obtained were thought sufficiently decisive to admit of this being done. The figures in the third column indicate the highest and lowest percentages of alkaloid obtained from the standard tinctures examined.

The work on the tinctures of gelsemium, green hellebore, cinchona, opium, and lobelia has yet to be published, and

evaporated over a water-bath, and the residue dried at 100° and weighed.

Experiment II.—The tincture was evaporated till free from spirit, the residual liquor acidified when cool, filtered into a separator, and colouring-matter removed by agitation, first with chloroform, and then with benzol. The solution was then rendered alkaline by the addition of a slight excess of ammonia, and shaken with three successive

15 c.c. benzol. From the mixed benzol solutions the alkaloids were extracted by agitation with acidulated water, the mixed acid solutions made alkaline, the alkaloids shaken out with three doses of chloroform, the chloroformic solutions mixed and shaken with ammoniated water and, after separation, drawn off and evaporated, and the residue dried at 100° till constant, and the weight taken.

Experiment III.—This was conducted exactly as Experiment II.—ether, s.g. 717, being substituted for benzol.

Experiment IV.—The tincture was evaporated, and the alkaloids removed from the residual extract by means of chloroform, as in Experiment I. The chloroformic alkaloidal solution was then shaken with successive small quantities of acidulated water until all alkaloid had been removed, the acid solutions mixed, and the alkaloids precipitated by a solution of iodine in potassium iodide. The alkaloidal periodides were collected on a filter, and, after washing with a little water, were treated with a solution of sodium hyposulphite. As this only dissolved a small portion of the precipitate, the remainder was dissolved in dilute sulphuric acid, and after mixing the solutions the alkaloids were recovered by means of chloroform from the solution previously made alkaline.

Experiment V.—The residual liquor obtained by evaporating the tincture was made alkaline with ammonia, and the alkaloids shaken out with three successive portions of chloroform. From the mixed chloroformic solutions they were extracted by agitation with acidulated water, the latter solution mixed, a slight excess of ammonia added, and the alkaloids again extracted by shaking repeatedly with small portions of ether, s.g. 717, until the latter came away colourless. The ethereal solutions were bulked, the alkaloids again extracted with acidulated water, and finally recovered with chloroform, the chloroformic solution being subsequently washed and evaporated, and the residue dried and weighed.

Experiment VI.—The tincture was evaporated until free from spirit, and the residual liquor made alkaline and shaken with three portions of chloroform. The mixed chloroformic solutions were washed twice with an equal volume of water, and the alkaloids shaken out with acidulated water. The acid solutions were mixed, a slight excess of ammonia added, the alkaloids extracted by agitation with chloroform, and the mixed chloroformic solutions, after being washed with ammoniated water, were evaporated, and the residue dried and weighed.

The results came out as follows:—

Experiment I.—100 c.c. tincture	=	0.23	gramme alkaloids
II.—100 " "	=	0.16	" "
III.—100 " "	=	0.24	" "
IV.—100 " "	=	0.24	" "
V.—100 " "	=	0.24	" "
VI.—100 " "	=	0.28	" "

The alkaloidal residues obtained in the above experiments had a yellowish-brown colour, and it was quite evident that although several of the processes might be capable of giving results sufficiently accurate to admit of their being utilised for the rough quantitative estimation of a sample of tincture of gelsemium, yet neither of them yielded the alkaloids in a sufficient state of purity to warrant its adoption for strictly comparative work.

The colouring-matter appeared to be of a resinous nature, and in subsequent experiments we found that it was present in greater amount in the more strongly alcoholic tinctures. The crude alkaloid from some of the 70 and 80 per cent. tinctures contained from 10 to 25 per cent. of this impurity, while, as a rule, the alkaloids extracted from a 40 per cent. tincture by means of ether or chloroform were practically uncoloured.

The colouring-body was closely adherent to the alkaloid, and was removable from its solution in chloroform or ether by means of acids, and also readily extracted from an alkaline solution along with the alkaloid.

The preliminary experiments were taken as having established the fact that the elimination of this foreign body by means of solvents was a practical impossibility, and two processes suggested themselves whereby it was hoped to free the alkaloid from its adherent impurity and obtain a pure product.

By the first it was sought to take advantage of the recorded fact that gelsemine, like strychnine, is capable of resisting the action of strong sulphuric acid.

The process was worked as follows:—

The chloroformic solution of the alkaloids, as obtained by Process 1, was shaken up with 5 c.c. sulphuric acid, s.g. 1.84, the containing vessel placed in water at 140° F., and allowed to remain in contact for half an hour. The alkaloidal solution was then diluted, a slight excess of ammonia added, the alkaloids shaken out with chloroform, the chloroformic solution shaken with ammoniated water and then drawn off and evaporated, and the residue dried and weighed.

By the second process, the alkaloids were precipitated from an acid solution as periodides, and the precipitate treated with 5-per-cent. sulphurous acid recently prepared. In this way it was found possible to get out all the alkaloids, and, on filtering, the impurity was left on the filter in the form of a chrome-yellow coloured powder. On rendering the alkaloidal solution alkaline, and shaking with chloroform, the alkaloids were obtained in a state of purity.

The two processes were tried, in comparison with that outlined under Experiment I., upon a complete series of tinctures, with the following results:—

ALKALOID IN GRAMMES FROM 100 C.C. TINCTURE.

Process	80-per-cent. Tincture	70-per-cent. Tincture	60-per-cent. Tincture	50-per-cent. Tincture	40-per-cent. Tincture
1. By Chloroform	0.056	0.052	0.043	0.044	0.048
2. By Precipitation	0.30	0.34	0.30	0.28	0.28
3. By H ₂ SO ₄ Conc.	0.22	0.22	0.20	0.22	0.25

It was found, as the result of further experiment, that the method of estimation by precipitation gave exactly concordant results, but that the weight of alkaloid obtained by Process 3 varied considerably, according to the length of time during which the alkaloids were subjected to the action of the concentrated acid, and it was therefore decided to employ the former for the estimation of all the tinctures.

The exact details of the process are as follows:—

Fifty c.c. of the tincture is introduced into a porcelain dish and evaporated over a water-bath to low bulk, water being added, if necessary, until all spirit is removed. The residual liquor is allowed to cool, 1 c.c. semi-normal sulphuric acid added, and the liquor filtered through cotton-wool into a separator. The dish is rinsed, first with a little acidulated water, and then with 10 c.c. chloroform, and the whole transferred to the separator, and the mixture well shaken. After separation the chloroform is drawn off, and the process repeated with two successive 5 c.c. chloroform. The mixed chloroformic solutions are then shaken with two successive small quantities of acidulated water to remove mechanically-adherent alkaloid, and the acid washings added to the contents of the funnel. The latter solution is then rendered alkaline by the addition of ammonia in distinct excess, and the alkaloid extracted by shaking with two successive 15 c.c. and then with 10 c.c. chloroform. The chloroformic solutions are drawn off in turn and mixed, and the alkaloids taken out by agitation with four successive small quantities of acidulated water. (Twenty c.c. distilled water is acidified with 2 c.c. dilute sulphuric acid B.P., and the mixture employed in four portions.) The acid alkaloidal solutions are mixed; an excess of solution of iodine in potassium iodide added, and the mixture allowed to stand until the precipitate has subsided and the supernatant liquid has become clear. The fluid portion is then poured upon a filter, and when filtration is complete, the filter is washed with a little distilled water, and is then transferred to the bottle containing the alkaloidal precipitate, and 5 c.c. 5-per-cent. sulphurous acid poured over it and allowed to filter into the bottle. The latter is then allowed to stand, with occasional agitation, until the alkaloidal periodides have been completely decomposed—indicated by the absence of dark-coloured particles. The solution is then filtered from the lemon-coloured residue, the bottle and filter rinsed with 2 or 3 c.c. sulphurous acid, and washed with water until the washings cease to give an alkaloidal reaction. The filtrate is then treated with a slight excess of ammonia, the alkaloids shaken out with 10 c.c., and then two successive 5 c.c. chloroform, the chloroformic solutions mixed, washed with ammoniated water, and then drawn off into a platinum dish and evaporated over a water-bath,

and the residue dried at 100°. The dish is finally transferred to a desiccator and allowed to cool, and is then weighed.

The bulk of the estimations were made exactly according to the process above detailed, but we subsequently found that by a slight modification it was possible to shorten the process considerably without interfering with its reliability. By this modification the alkaloids are extracted from the alkaline residual liquor by means of chloroform, as above described, and then taken out by agitation with water acidulated with sulphurous acid. (Twenty c.c. distilled water is mixed with 5 c.c. 5-per-cent. sulphurous acid, and the solution employed in four successive portions). The acid alkaloidal solutions are mixed, and a few drops of 1-per-cent. iodine solution added, care being taken not to add the latter in quantity sufficient to precipitate any alkaloid. The liquid is then filtered, the precipitate washed with a little water, and the alkaloids recovered from the filtrate, previously made alkaline, by means of chloroform. The addition of iodine to the sulphurous-acid solution appears to break up the compound of alkaloid and colouring matter, the liquid becomes turbid, and the colouring-substance separates in the form of a pale

with solution of iodine in potassium iodide, and with Mayer's reagent a white curdy precipitate, which dissolves on heating, but is re-precipitated on cooling. It gives a white precipitate with mercuric chloride, and with tannic acid a white curdy precipitate, which is readily soluble in water, and is therefore not obtained in a dilute solution of the alkaloid.

Gold chloride, platinum chloride, and phospho molybdic acid each gives a lemon-yellow precipitate, the two former being soluble in hot water, and being re-precipitated in a crystalline form as the solution cools.

If ammonia or potash be added to an acid solution, a white precipitate is obtained, which dissolves in an excess of the reagent.

The results of the estimation of the tinctures are given in Table I.

The percentage yield of alkaloid by the tinctures prepared by continuous percolation was so greatly in excess of the amount given by those prepared by the B. P. process that it has been thought advisable to give the results in two divisions, and also to call special attention to the yield of

TABLE I.
Showing Quantitative Results of Estimation of Tinctures of Gelsemium.

A.—From Tinctures made by Macero-Percolation.

No.	Amount of Alkaloid in Grammes from 100 c.c. Tincture					Amount of Extractive in Grammes from 100 c.c. Tincture				
	80-per-cent. Tincture	70-per-cent. Tincture	60-per-cent. Tincture	50-per-cent. Tincture	40-per-cent. Tincture	80-per-cent. Tincture	70-per-cent. Tincture	60-per-cent. Tincture	50-per-cent. Tincture	40-per-cent. Tincture
1	·040	·042	·042	·038	·033	1·84	1·81	1·81	1·96	2·08
2	·030	·034	·030	·028	·028	1·50	1·54	1·54	1·55	1·68
3	·021	·020	·021	·020	·017	1·20	1·22	1·22	1·26	1·24
4	·018	·024	·024	·025	·024	1·64	1·68	1·64	1·68	1·78
5	·018	·018	·020	·020	·015	1·03	1·20	1·16	1·20	1·23
6	·039	·041	·045	·039	·037	1·79	1·82	1·83	1·86	1·92
Average	·028	·030	·030	·028	·026	1·51	1·54	1·53	1·60	1·66

B.—From Tinctures made by Continuous Percolation.

No.	80-per-cent. Tincture	70-per-cent. Tincture	60-per-cent. Tincture	50-per-cent. Tincture	40-per-cent. Tincture	80-per-cent. Tincture	70-per-cent. Tincture	60-per-cent. Tincture	50-per-cent. Tincture	40-per-cent. Tincture
7	·057	·072	·076	·066	·054	1·48	1·70	1·68	1·68	1·68
8	·043	·040	·048	·039	·032	1·72	1·74	1·82	1·78	1·74
9	·059	·060	·065	·063	·060	2·42	2·48	2·48	2·46	2·36
10	·055	·058	·063	·052	·052	2·56	2·58	2·50	2·50	2·36
11	·072	·072	·073	·058	·063	2·82	2·88	2·74	2·84	2·76
12	·025	·026	·025	·021	·022	1·16	1·16	1·18	1·22	1·18
Average	·052	·055	·058	·051	·048	2·03	2·09	2·07	2·08	2·01

yellow, flocculent precipitate. The alkaloid is retained in solution, the reducing action of the acid decomposing the brown alkaloidal precipitate as rapidly as it is produced. The results obtained are from 2 to 3 per cent. higher than by the original process, but the alkaloidal residue is slightly coloured, and is, presumably, not absolutely pure.

The colouring-substance left on the filter is soluble, though not very readily, in dilute sulphuric acid. We have not attempted to determine the nature of this compound, but find that its solution is not precipitated by alkaloidal reagents, and that even after prolonged boiling it does not reduce Fehling's solution.

As obtained by either of the above processes, the alkaloids are in the form of a colourless or slightly straw-coloured fused mass, having a vitreous appearance. When heated for some time at a temperature approaching the boiling-point of water, it darkens somewhat in colour. It is very sparingly soluble in cold water, more so in boiling water, the latter solution becoming turbid on cooling, owing to separation of alkaloid.

The alkaloidal residue is perfectly soluble in dilute acids. A solution in dilute sulphuric acid gives an orange precipitate with Thresh's reagent, a chocolate-brown precipitate

alkaloid and extractive by the tinctures prepared by the two processes.

A reference to the table will also show that the most perfect exhaustion of the drug may be effected by the employment of a 60 or 70 per cent. menstruum, the former giving slightly the better results.

The alkaloidal strength of the tinctures varies between the limits of ·020 and ·076 per cent., and it is evidently desirable that a fixed alkaloidal standard should be adopted for this tincture.

The percentage of extractive was ascertained by evaporating 10 c.c. of the tincture over a water-bath, drying the extract at 100° C, weighing, and multiplying the result by 10.

The effect produced on mixing the tinctures (1) with water and (2) with 90 per cent. alcohol was noted, and the results given in Table II. show the appearance presented immediately on admixture, and also after standing for twelve hours.

Having ascertained the most suitable menstruum, and also the average alkaloidal and extractive strength of the tinctures, it was thought expedient to test the comparative value of alternative processes for the exhaustion of gelsemium-root.

TABLE II.
Showing results obtained on mixing the samples of tincture (1) with 90 per cent. alcohol, and (2) with water.

No.	Result when 1 vol. of tincture is mixed with 3 vols. alcohol										Result when 1 vol. of tincture is mixed with 2 vols. water			
	80 per-cent. Tincture	70 per-cent. Tincture	60 per-cent. Tincture	50 per-cent. Tincture	40 per-cent. Tincture	80 per-cent. Tincture	70 per-cent. Tincture	60 per-cent. Tincture	50 per-cent. Tincture	40 per-cent. Tincture	80 per-cent. Tincture	70 per-cent. Tincture	60 per-cent. Tincture	50 per-cent. Tincture
	Clear : no deposit	Clear : then clear, with trace ppt.	Clear : then clear, with trace ppt.	Faint opalescence : then clear, with slight ppt.	Cloudy opalescence : then clear, with slight ppt.	Turbid : then clear, with copious ppt.	Milky opalescent : then clear, with copious ppt.	Milky opalescent : then clear, with copious ppt.	Cloudy opalescent : then clear, with copious ppt.	40 per-cent. Tincture				
	Clear : then clear, with faint trace ppt.	Clear : then clear, with faint trace ppt.	Very faint opalescence : then clear, with trace ppt.	Faint opalescence : then clear, with slight flocc. ppt.	Opalescent : then clear, with flocc. ppt.	Milky opalescent : then turbid, with ppt.	Milky opalescent : then turbid, with ppt.	Milky opalescent : then clear, with copious ppt.	Cloudy opalescent : then milky opalescent, and slight ppt.	Opalescent : then opalescent, with trace ppt.				
	Clear : no deposit	Clear : then clear, with faint trace ppt.	Clear : then clear, with faint trace ppt.	Clear : then clear, with slight ppt.	Faint opalescence : then clear, with slight flocc. ppt.	Milky opalescent : no change	Milky opalescent : no change	Milky : then clear, with copious deposit	Cloudy opalescent : no change	Opalescent : no change				
	Clear : then clear, with faint trace ppt.	Clear : then clear, with trace ppt.	Very faint opalescence : then clear, with trace ppt.	Opalescent : then clear, with trace ppt.	Cloudy opalescent : then clear, with slight ppt.	Milky opalescent : no change	Milky opalescent : no change	Milky : then clear, with copious deposit	Cloudy opalescent : then milky opalescent ; no separation	Faint opalescent : then cloudy opalescent ; no ppt.				
	Clear : no deposit	Clear : then clear, with trace ppt.	Clear : then clear, with trace ppt.	Faint opalescence : then clear, with slight ppt.	Cloudy opalescent : then clear, with slight ppt.	Cloudy opalescent : then milky opalescent ; no separation	Cloudy opalescent : then milky opalescent ; no separation	Turbid : then clear, with copious flocc. deposit	Cloudy opalescent : then opalescent, with ppt.	Opalescent : then cloudy opalescent ; no ppt.				
6	Clear : no deposit	Clear : then clear, with faint trace ppt.	Clear : then clear, with trace ppt.	Opalescent : then clear, with slight ppt.	Cloudy opalescent : then clear, with slight ppt.	Turbid : then clear, with copious flocc. deposit	Milky opalescent : then clear, with copious ppt.	Milky opalescent : then clear, with copious ppt.	Cloudy opalescent : then opalescent, with ppt.	Opalescent : then opalescent, with slight ppt.				
7	Clear : then clear, with faint trace ppt.	Clear : then clear, with slight flocc. ppt.	Faint opalescence : then clear, with slight flocc. ppt.	Opalescent : then clear, with mucilag. deposit	Opalescent : then clear, with much deposit	Turbid : then clear, with copious flocc. deposit	Turbid : then clear, with copious flocc. deposit	Cloudy : then clear, with copious flocc. deposit	Opalescent : then clear, with flocc. deposit	Slight opalescence : no change				
8	Clear : then clear, with trace ppt.	Faint opalescence : then clear, with flocc. ppt.	Faint opalescence : then clear, with flocc. ppt.	Opalescent : then clear, with flocc. ppt.	Opalescent : then clear, with flocc. ppt.	Milky : then clear, with grey deposit	Cloudy : then clear, with slight deposit	Cloudy : then clear, with white ppt.	Faint opalescence : then opalescent ; no ppt.	Faint opalescence : then opalescent ; no ppt.				
9	Faint opalescence : then clear, with very slight flocc. ppt.	Opalescent : then clear, with slight flocc. ppt.	Opalescent : then clear, with slight flocc. ppt.	Faint opalescence : then clear, with flocc. ppt.	Opalescent : then clear, with flocc. ppt.	Cloudy : then clear, with white ppt.	Cloudy : then clear, with white ppt.	Cloudy : then clear, with white ppt.	Cloudy opalescent : then opalescent, with slight deposit	Opalescent : no change				
10	Clear : then clear, with faint trace ppt.	Faint opalescence : then clear, with slight flocc. ppt.	Faint opalescence : then clear, with flocc. ppt.	Faint opalescence : then clear, with flocc. ppt.	Opalescent : then clear, with flocc. ppt.	Milky : then clear, with copious deposit	Cloudy : then clear, with copious deposit	Cloudy : then clear, with white ppt.	Opalescent : then cloudy ; no separation	Slight opalescence : then opalescent ; no ppt.				
11	Clear : then clear, with trace ppt.	Faint opalescence : then clear, with slight flocc. ppt.	Faint opalescence : then clear, with slight flocc. ppt.	Faint opalescence : then clear, with slight flocc. ppt.	Opalescent : then clear, with flocc. ppt.	Milky : then clear, with bulky ppt.	Milky : then clear, with bulky ppt.	Turbid : then clear, with bulky ppt.	Cloudy : then clear, with bulky ppt.	Opalescent : then cloudy opalescent ; no ppt.				
12	Clear : then clear, with trace flocc. ppt.	Clear : then clear, with trace flocc. ppt.	Faint opalescence : then clear, with slight flocc. ppt.	Faint opalescence : then clear, with slight flocc. ppt.	Faint opalescence : then clear, with slight flocc. ppt.	Opalescent : then cloudy ; no separation	Opalescent : then cloudy ; no separation	Opalescent : then cloudy opalescent ; no separation	Faint opalescence : then opalescent ; no separation	Clear : then faint opalescence				

For this purpose two good specimens of the drug were selected, and tinctures prepared from them with a 60-per-cent. menstruum, by each of the following processes:—

I. An ounce of the drug in No. 40 powder was macerated in 8 fluid ounces of menstruum for seven days, with occasional agitation. The fluid portion was then strained off, the marc expressed, the liquids mixed, and a sufficient quantity of menstruum added to make the volume of the tincture up to 8 fluid ounces, and the whole filtered.

II. An ounce of the drug in No. 40 powder was macerated in 4 fluid ounces of menstruum for forty-eight hours, with occasional agitation. It was then strained and the marc pressed, the pressings being added to the strained liquid. The marc was then macerated in the remainder of the menstruum for twenty-four hours, the tincture strained off, the marc again pressed, and the liquids mixed and made up to 8 fluid ounces, and the whole filtered.

III. The B. P. process—maceration and percolation—the last portion of the tincture being distilled.

IV. An ounce of the drug in No. 40 powder was moistened with $1\frac{1}{2}$ fluid drachm menstruum, and was then packed in a conical percolator; more menstruum was then added, and percolation allowed to proceed, slowly and continuously, until 8 fluid ounces of percolate had been collected.

TABLE III.

Showing Results of Experiments on Process for making Tincture.

No.	Alkaloid per cent.				Extractive per cent.			
	By Maceration	By Double Maceration	By B.P. Process	By Continuous Percolation	By Maceration	By Double Maceration	By B.P. Process	By Continuous Percolation
1	.038	.041	.050	.071	1.78	1.90	2.04	2.16
2	.045	.047	.052	.062	2.02	2.30	2.44	2.56

The tinctures were estimated by the process already given, with the results indicated in Table III. From those results it is quite evident that perfect exhaustion of the drug can only be effected by the process of continuous percolation.

NEW COMPANIES.

MASON & CO. (LIMITED).—Capital 5,000*l.*, in 1*l.* shares. Objects: To acquire the business of patent-medicine vendors and drug merchants, hitherto carried on by Mason & Co., at South Shields and Jarrow-on-Tyne, and to develop and extend the same. The first subscribers (who take one share each) are:—T. H. Mason, Westoe, South Shields, medicine vendor; J. C. Tosbach, 49 Ward Street, Sunderland, agent; A. Bainton, 16 Hillary Street, Leeds, chemist; W. Veitch, 45 Harold Street, Leeds; F. V. Butterfield, 14 Beulah Street, Harrogate, chemist; J. Dawson, 65 Warwick Road, Batley, chemist; and W. Firth, 24 Barclay Street, Sunderland, agent. The qualification of a director is 1,000*l.* Managing director, Thomas Henry Mason. Registered office, 80 King Street, South Shields.

KERNICK & SON (LIMITED).—Capital, 5,000*l.*, in 5*l.* shares. Objects: To acquire and carry on the business of wholesale and manufacturing chemist and grocers' sundryman now carried on by R. P. Kernick, at Cardiff, under the style of Kernick & Son. The first subscribers (who take one share each) are:—Louisa Kernick, 21 Glynrhondda Street, Cardiff, widow; Laura S. Prunier, 21 Glynrhondda Street; Edith Kernick, 21 Glynrhondda Street, spinster; D. Harries, 108 Queen Street, Cardiff, chemist and druggist; Charles Radcliffe, 13 Richmond Crescent, Cardiff, shipowner; R. P. Kernick, Cardiff, wholesale druggist; and G. Hopkins, The Hayes, Cardiff, merchant. There shall not be less than three nor more than five directors; and the first are: J. L. Treharne (chairman), D. Harries, G. Hopkins, and R. P. Kernick. Qualification, 25*l.* Remuneration, 1*l.* 1*s.* for each board attendance. Registered office: 12 New Street, Cardiff.

JOHN THOMPSON (LIMITED).—Capital, 25,000*l.*, in 5*l.* shares. Objects: To acquire the business of wholesale druggist and chemist now carried on by John Thompson, at 53 Hanover Street, Liverpool, and to carry on business as chemists, druggists, drysalters, oil and colour men, &c. The first subscribers (who take one share each) are:—J. Thompson, Grassendale Park, Liverpool, wholesale druggist; C. Blood, Brows Lane, Formby, warehouseman; I. J. Nicholson, Tarbock Road, Huyton, cashier; W. P. Lake, 11 Olive Mount, Birkenhead, druggists' salesman; W. Wilson, 8 Broadbelt Street, Walton, Liverpool, salesman; Jas. Logan, 28 Underley Street, Liverpool, warehouseman; and G. H. Burroughs, 29 Christ Church Road, Birkenhead, chemist. The number of directors shall be determined by special resolution of the company; qualification, 500*l.* Managing director, John Thompson; qualification, 5,000*l.*

LONDON GUM COMPANY (LIMITED).—Capital, 20,000*l.*, in 1*l.* shares. Objects: To carry on the business of gum merchants and manufacturing chemists under certain patents. The first subscribers (who take one share each) are:—J. F. Drescher, 25 Camden Grove, Peckham, manufacturing chemist; R. Guy, 82 Bishopsgate Street, E.C.; George Graveley, Syduey Road, Enfield, ironfounder; W. Moses, 13 Rodney Terrace, Putney, retired captain; H. M. F. Drescher, 5 Pope's Road, Brixton, commercial traveller; C. H. Revill, 105 King's Road, Peckham, artist; and J. Filley, 9 Trafalgar Road, Dalston, housekeeper. The first directors shall be W. Moses, J. F. Drescher, and R. Guy, and two persons to be nominated from the shareholders in general meeting. Remuneration, 100*l.* per annum each, W. Moses and J. F. Drescher, as managing directors, receiving 600*l.* per annum each. Qualification for directors, 100*l.* Registered office: Mildmay Chambers, Union Court, Old Broad Street, E.C.

COCOA AND CHOCOLATE COMPANY (LIMITED).—Capital 50,000*l.*, in 1*l.* shares. Objects: To acquire the business of cocoa and chocolate manufacturers hitherto carried on by H. Schweitzer & Co. (Limited)—a company incorporated in 1838—and generally to carry on business as manufacturers of and dealers in cocoa in all its forms, manufactured or unmanufactured, including cocoatina, chocolate, cocoa-beans, and cocoa-butter. The first subscribers (who take ten shares each) are:—Major-Gen. F. E. Cox, 6 Pierrepont Road, Acton; Major-Gen. J. E. Symonds, 13 Clarendon Park, Jersey; Mrs. J. Symonds, 17 Gloucester Place, Hyde Park; J. A. Hallett, 7 St. Martin's Place, W.C.; F. Miller, Telegraph Street, E.C.; A. P. Seymour, Waterloo House, Weymouth; J. Symonds, Waterloo House, Weymouth; and W. H. Simpson, 6 Moorgate Street, E.C. There shall not be less than three nor more than five directors. The first are: Major-Gen. F. E. Cox, F. Miller, and J. A. Hallett. Remuneration, 200*l.* per annum, and a commission of 5 per cent. on the amount distributed as dividend.

FREDERICK N. TURNER & CO. (LIMITED).—This company consists of not more than 100 members, each of whom, in the event of winding-up, is liable for 1*l.* Objects: To acquire, develop, and turn to account certain patents; to carry on the business of extracting grease from skins and hides of all kinds; to buy, sell, split, degrease, purify, tan, prepare for market, manufacture and deal in skins, hides, and skivers, and to carry on the business of chemists, druggists, bleachers, dyers, cleaners, mechanical engineers, metal-founders, millwrights, machinists, smiths, and manufacturers of machinery connected with the preparation of leather. The members are:—F. N. Turney, Sherwood Rise, Nottingham; T. Leman, St. Peter's Church Walk, Nottingham; R. Sands, 5 Baker Street, Nottingham; C. M. Leman, The Park, Nottingham; T. C. Leman, The Park, Nottingham; H. M. Leman, Magdalene Cottage, Cambridge; J. J. Taylor, 18 Cromwell Street, Nottingham. For the purpose of determining the proportions in which the members are interested in the company, members shall be deemed to be interested in the company in proportion to the number of holdings to which they are entitled, of which holdings there are 1,000. The number of directors is not to exceed six, the first being F. N. Turney and T. Leman. Remuneration to be fixed by the company in general meeting.

THE FLUORESCENCE OF QUININE is, according to Sestini and Campani, destroyed by phenacetin.

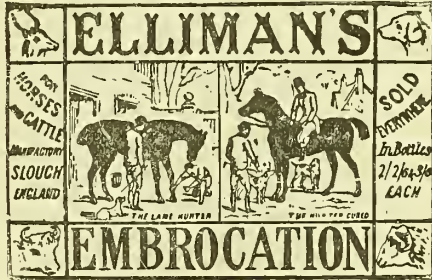
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CHOLERA is rampant in Eastern Europe, and has reached Paris. Here at home the mind of the public is already alarmed. "**SANITAS**" Disinfecting Fluid is the only Disinfectant that can be taken internally, and the "**SANITAS**" DISINFECTANTS and **APPLIANCES** have the Largest Sale in the World.

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NEW PRICE LIST NOW READY.

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Free to any address in the United Kingdom.

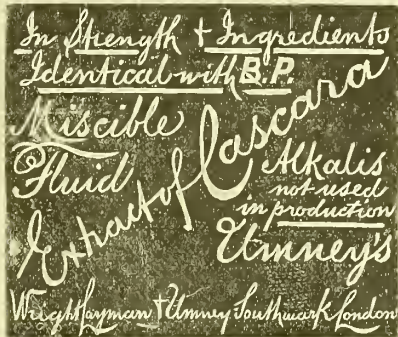


See first page, facing inside of front of cover, of first issue of this month, for latest particulars.

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Is an Embrocative Balm for the People, and a source of profit to the Retailer
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AS SUPPLIED TO THE QUEEN.
In Bottles and Patent Syphons.

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MOSS'S Mixes with Water. Certain and Pleasant. Not Nauseous. **MISCIBLE** "A great improvement." "A very elegant preparation of this drug." "Superior to anything yet introduced." (REGISTERED) **CASCARA**

—Extracts from Letters.

See the Medical and Pharmaceutical Press.

In 1-lb. and 5-lb. bottles, through any Wholesale House, or from the only makers—

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To bear Name and Address of Buyer.

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"OF EXCEPTIONAL MERIT AND ORIGINALITY."
Chemist and Druggist.

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MUMFORD'S (FARRINGTON ROAD, LONDON, E.C.) THE BEST THAT CAN BE PRODUCED.			
PURE CRUSHED LINSEED	{ 18/ }	1 cwt. carriage paid; or ✕ 7, 14 & 28 lbs. free on rail Lond.	
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PURE FULLER'S EARTH (Light Colour)	{ 16/ }	1 cwt. carriage paid; or ✕ 7, 14 & 28 lbs. free on rail Lond.	
PURE FULLER'S EARTH	{ 14/ }	1 cwt. carriage paid; or ✕ 7, 14 & 28 lbs. free on rail Lond.	
✕ CARRIAGE PAID ✕ To Railway Stations within the radius of 200 miles from London, and up to 2s. to Stations beyond, on 112 lbs. and upwards of above articles.			

Fletcher's Concentrated Liquors
.....

TEN-GUINEA

Prize Competition.

See page 5, August 6th.

Editorial Comments.

THE PHARMACEUTICAL COUNCIL
AND POISONOUS PROPRIETARY
MEDICINES.

THE Pharmaceutical Council has issued its circular respecting
the sale of proprietary medicines containing poison to

all chemists on the British register within the past week. We cannot think that there are many of the 14,000 persons thus addressed to whom the information will come as news. There are chemists, we suppose—indeed, we have known such—who consider that, having served an apprenticeship to the business, and being themselves exceptionally gifted, they require no further information such as trade journals give during the rest of their lives. Such men do exist, and we hear of them occasionally when calamity, represented by the Board of Inland Revenue, the Apothecaries' Society, the Food and Drugs Inspector, or some other authorised prosecutor comes down upon them. Then there is indignation and execration. The trade journals are called upon then to witness to the monstrous injustice of the proceedings, and an associated protest or defence fund is urgently demanded. It is very good of the Pharmaceutical Council to show so much consideration to this class of persons—men who will not take the trouble to acquaint themselves through the ordinary channels with matters which so directly concern their business.

The circular states quite accurately that the effect of the magisterial decision on April 30 last in the chlorodyne case was "that proprietary preparations containing poisons within the meaning of the Pharmacy Act, 1882, although bearing a medicine-stamp are not exempt from the restrictions and conditions as to sale by retail imposed by the Act." The circular then proceeds to state that the Council, having instituted proceedings against several large shopkeepers not registered as chemists and druggists, for keeping open shop for the sale by retail of poisonous proprietary preparations, these persons have paid penalties and given undertakings to discontinue the practice.

So far as the shopkeepers referred to are concerned, the Council have followed up the Bow Street decision satisfactorily. They are not to be blamed because certain cocks will not fight. But their circular would have been infinitely more effective in deterring unregistered persons from selling medicines containing poison if they could have printed on it the report of a suit actually tried. This is a point which has to be fought through before it can be regarded as settled law. There surely cannot be any difficulty in discovering a defendant ready to figure behind the *versus* for the purpose of testing the opinion of a court. In our own columns the Association of Owners of Proprietary Medicines have declared their intention of defending any member who may be proceeded against under the Act, and to carry the matter to the High Court if the facts and evidence are such as to ensure an authoritative exposition of the Act. The grocers' Associations have made similar announcements, and we have before us a circular, issued by a Mr. Leggett, of "Leggett's Drug Stores, 95 Brunswick Road, Liverpool," giving the following names as those of persons who have subscribed towards a "Drug and Grocers' Store Patent-medicine Defence Association":—

Mr. W. B. Mason, 78 Albion Street, Leeds; Burdon & Co., merchants, Manchester; Seymour, Mead & Co., merchants, Manchester; Mr. Withall, 73 Moss Lane, West Manchester; Mr. Owen Owen, London Road, Liverpool; Mr. Howard Burton, High Street, Gravesend; Mr. W. Green, Central Supply Stores, Bolton; Mr. J. Shaw, Newgate Street, Bishop Auckland; Mr. L. Burton, 23 Otley Road, Shipley; J. Airey & Son, grocers, Windermere; Mr. D. Melia, merchant, Manchester; Messrs. Bentham & Co., grocers, Farnworth; Mr. J. Carrie, grocer, Bolton; Mr. W. Holden, grocer, Plumstead; Mr. J. P. Dedrick, Cash Stores, Maidstone; Messrs. Clarkson & Sons, Supply Stores, Hereford; Mr. Edward Hughes, Mid Kent Stores, Tunbridge Wells; Messrs. Harris & Hall, Stores, Chichester; Messrs. Stranaghan & Stephens, Stores, Cardiff; Mr. Geo. Wilson, 96 Beau Street, Hull; Messrs. Gregory, Love & Co., Reading.

Certainly very few of these are registered chemists and druggists, and, we suppose, many of them are ready to welcome a correspondence with Messrs. Flux & Co.

Besides their hint to unregistered persons, the Pharmaceutical Council offer a warning to chemists and druggists against selling proprietary medicines containing scheduled poisons without observing the statutory conditions in regard to labelling, &c. This caution seems to have alarmed some of our correspondents. We have been asked, from three different parts of the country, to say whether a quinine-and-iron tonic made up with chloroform-water is to be labelled "poison." We do not know whether the question is put as a *reductio ad absurdum* or seriously. Certainly, taken literally, the Council's circular would involve such labelling; but, as we have often pointed out, the Act does not authorise this construction, and no chemist need trouble himself about it. It would certainly not be prudent on the part of the Council to commit itself to a definite indication of how much poison a chemist may mix in his medicines without labelling them as such; but this consideration only raises the question of the expediency of issuing such a circular at all.

THE MEDICINE-STAMP DUTY.

Mr. E. N. ALPE, of the Solicitor's Department, Somerset House, and of the Middle Temple, has just written for us some notes on subjects treated in his "Handy Book of Medicine-stamp Duty," and which will appear in subsequent issues of that work in the form of an appendix. The object of these notes is to give information concerning new forms of procedure and new methods in practice, so as to bring the work fully up to date with regard to the views of the Commissioners of Inland Revenue as far as the Medicine-stamp Acts are concerned. The following are a few of the notes which will be thus incorporated in the "Handy Book":—

BREAKING STAMPED PACKETS ("Handy Book," pp. 23, 29).

A duly stamped box or packet of powders may be broken and the contents retailed singly or otherwise by a person licensed to sell dutiable medicines, without payment of further duty, provided that the powder or powders when retailed are handed to the purchaser or merely wrapped in paper which is not made into a "packet" by being fastened with gum, wax, string, &c. In the same manner may be retailed pills, tabloids, lozenges, and any other medicines which are capable of being separately handled without payment of further duty. It must be carefully observed that this method of handling dutiable medicines, as well as that described on pp. 23 and 29, is only permissible to retailers who are licensed to sell medicines chargeable with stamp-duty.

MEDICATED HERBS ("Handy Book," pp. 54, 55).

The charge of duty applies to *medicated* herbs only. Packets containing herbs which have not been subjected to any process of medication are not chargeable with duty whether the herbs are of one kind or several, and, if of several kinds, whether mixed in known or unknown proportions; and they may be held out as proprietary and recommended without incurring liability. Directions for making a decoction from such herbs may also be given, but if the decoction itself be sold its liability to duty will be governed by the general rules (p. 63). "Medicated" in the Act is doubtless a mistake for "medicinal."

MEDICATED WINES ("Handy Book," pp. 58, 59).

Wine so medicated as not to be unfitted for use as a beverage is regarded as a beverage, and the vendor selling it must hold the proper Excise licence for the sale of wine. Such wine may be held out as a proprietary article and

recommended for the prevention, cure, and relief of ailments, &c., without becoming chargeable with medicine-stamp duty, and the vendor may sell it without a medicine-licence.

THE POSSESSIVE CASE ("Handy Book," p. 73).

The statement upon a label, &c., that the medicine which the label describes is prepared according to the British Pharmacopœia rebuts the presumption of proprietorship conveyed by the use of the possessive case and authorises the sale of the medicine unstamped as regards the claim of proprietorship. Thus a medicine labelled "Smith's compound tincture of benzoin, prepared according to the British Pharmacopœia," is not chargeable with duty as a proprietary medicine. This regulation has been extended to include other Pharmacopœia of recognised reputation and authority, such as the French Codex and Martindale's Pharmacopœia. When the formula of a medicine is adopted and published by a standard text-book (Stokes), it certainly ceases to be a "nostrum."

MEDICINAL DRUG VENDED ENTIRE—EXEMPTIONS ("Handy Book," pp. 104, 105).

Adulteration.—A vendor who desires to avail himself of the benefit of the second general exemption from stamp-duty in favour of "all medicinal drugs whatsoever which shall be uttered or vended entire without any mixture or composition with any other drug or ingredient whatsoever," &c., must take care that the drug is not *adulterated*. For example, it is or was a common practice to adulterate menthol with spermaceti and sell the compound as pure menthol. Pure—*i.e.*, unadulterated—menthol is not chargeable with duty; but the benefit of this exemption has been denied to the compound, which has been held to be liable.

TINCTURES (see also "Handy Book," p. 54).

Although tinctures are included in the classes of preparations which are chargeable with duty, it is permissible to add to an essence the quantity of spirit necessary to prevent decomposition without making it a "tincture," so as not to deprive the maker or vendor of the benefit of this exemption. The quantity of spirit necessary for this purpose is considerably less than that used in tinctures, so that there is no difficulty in distinguishing between such preparations. It should always be borne in mind that any potable medicinal preparation containing alcoholic spirit in a considerable quantity must be so flavoured as to be rendered unfit for use as a beverage.

PERMITTED AILMENTS ("Handy Book," pp. 101, 102).

To the list of ailments, on pp. 101, 102, which are not considered to attract a charge of duty should be added "tender feet."

APPROPRIATED STAMPS ("Handy Book," p. 222).

The annual charge for printing appropriated stamps is now at a uniform rate of 8*l.* 8*s.*, whether the stamps required are at one rate of duty or more. Not less than 10*l.* worth of appropriated stamps are supplied at one time.

DISCOUNT ("Handy Book," p. 23).

No discount is now allowed upon the purchase of medicine-stamps.

THE GROWTH OF THE REVENUE.

The amount realised by the medicine-stamp duty during the last four years has been:—Year ending March 31, 1889, 202,375*l.*; 1890, 217,264*l.*; 1891, 225,701*l.*; 1892, 240,062*l.*

INDIAN OPIUM.

THE letters which appear in our Correspondence section regarding the use of opium for medicinal purposes in India raise two questions of much importance to the drug-trade of our great dependency. The point noted by our Rangoon correspondents may first be commented upon. The Financial Commissioner of Burma has lately promulgated an order under which any person "following the profession of chemist in the district of Rangoon Town" who wishes it must take out a licence "for the retail of opium, pure or mixed," which licence is granted "on the condition that such opium shall be procured from the Government Treasury and shall be used *bonâ fide* as medicine or in medical preparations and prescriptions." The fee payable for this licence is 25*r.* Under the Opium Act of 1878 the Administration of Burma, in common with the Government of Bengal and the North-West Provinces, and the Administrations of Assam and the Central Provinces, have the power to permit the sale of *Abkari*, or Excise opium, in districts within their jurisdiction according to the rules framed under the Act. *Abkari* is an opium specially prepared at Patna and Benares, and it is the quality most used in India, being issued to the various district authorities at cost price, and they in turn issue it to licensed dealers on payment of the Excise duties. The annual consumption of this class of opium in India is over 1½ million pounds, and it has been noticed of recent years that the consumption in Burma has very largely increased, so that now the quantity used there amounts to nearly a fourth of the whole of the opium ranked for home consumption. So much of the Indian revenue depends upon the sale of opium, that it is not unreasonable that the different Administrations should look very closely after the sale of the drug, the bulk of it being used for other than medicinal purposes. Moreover, the recent agitation in England regarding the opium-traffic has, to some extent, influenced those in authority, and the consequence is that close attention is being paid to the conditions of sale. This applies to Burma especially, with the result complained of by our Rangoon correspondents. Against the restriction of the sale of opium *per se* by imposing upon all retailers, whether chemists or not, the necessity of taking out a licence, there can be no valid objection while the conditions of the opium-traffic in India remain as they are. But the terms of the Burma licence are highly objectionable to chemists, since they imply that the vending of pharmaceutical preparations of opium is the same as the sale of the drug to opium-eaters, and they further exclude the use of any but Excise opium for medicinal purposes. To chemists who take some pride in their work, and who follow the precepts of the British Pharmacopœia, the latter restriction must be very irksome; for, as we had occasion to show in our issue of October 24, 1891, Indian opium is peculiar in that it contains just about 4 per cent. of morphine, and almost 6 per cent. of narcotine. The latest analysis that we can find of Benares opium (which may be taken to represent *Abkari*) is quoted by the authors of *Pharmacographia Indica*, and shows on the dried article 3.86 per cent. of morphine and 5.91 per cent. of narcotine, which figures practically agree with Scott's results of thirty years before, and Flückiger's of 1878. In spite of "Anglo-Indian's" protestations that Excise opium is extensively used for medicinal purposes in Bombay, there is no question that the opium would in this country be condemned as unfit for use in the preparation of British Pharmacopœia galenicals, such as laudanum. It may give a fine-looking tincture, since the opium is rich in extractive matter, but by no process of reasoning can we make a 4-per-cent. opium equal the 10-per-

cent. official article; and, as we have previously pointed out, the large percentage of narcotine in Indian opium is pernicious. For these reasons it is to be hoped that the Administration of Burma will withdraw the restrictive conditions which accompany the opium-licence. The occasion is also a good one for an inquiry into the morphine value of Ex-cise opium by a competent pharmaceutical chemist resident in India. Literature is woefully deficient in exact information derived from modern methods of assay. The inquiry should include trial of the opium in the preparation of pharmacopœial galenicals and comparison with B.P. opium used in the same way. The results from such an investigation could not fail to be of much interest to all pharmacists, and they would be the first practical step towards placing the medicinal use of Indian opium on a proper footing, while they might lead to experiments in opium-production with the view to determining if its morphia value can be increased on Indian soil.

COMMENTARY.

A NEW ANÆSTHETIC.—A leading German firm of chemical-manufacturers have patented a process for the production of a new anæsthetic, amido-eugenol acetate, prepared by the action of alcoholic ammonia upon eugenol-aceto-ethyl ether. It is obtained as a fine powder, which has the peculiarity of producing local anæsthesia when placed upon the mucous membrane.

SOZAL is described by Dr. Schaerges, of Berne, in the *Pharmaceutische Zeitung* as aluminium paraphenol sulphonate ($C_6H_4(OH.SO_3)_3Al$). It is a bactericide having the advantages in surgery that corrosive sublimate possesses, without its toxicity. It occurs in small crystals, which have a strong astringent taste and only a slight odour of phenol. The salt is readily soluble in water and glycerine, and also in spirit. Clinical experiments with it are being made.

THE INTERNATIONAL PHARMACOPŒIA.—We are sorry for the Americans. They have got hold of the International Pharmacopœia idea. At a recent meeting of the *Materia Medica* and Pharmaceutical Section of the American Medical Association it was suggested that one of the objects of the Association should be the promotion of an International Pharmacopœia. The idea is only in embryo yet, but meanwhile Professor Remington is advocating a Pan-American Pharmacopœia—i.e., one which will be used over the whole of South and North America.

PRIORITY.—The French are indeed an amusing people. At the last meeting of the Paris Society of Pharmacy there was a solemn discussion as to whether M. Dumontier or M. Boulé deserves the credit of having given to the world first, in 1889, the brilliant idea of preserving chloroform in hermetically-sealed flasks. To satisfy them a reference might have been made to *THE CHEMISTS' AND DRUGGISTS' DIARY*, 1888, page 195, where an advertisement states that chloroform "for export is supplied in hermetically-sealed flasks when required." And that had been going on for years before.

F.C.S. AND F.I.C.—In the prospectus for the School of Pharmacy which has just been issued it is noteworthy that the title F.C.S. is rigidly excluded from the names of those who have it, but whenever it can be done F.I.C. is given. The distinguished men who constitute the officers and committee of the Chemical Section of the British Association appear to adopt an opposite course, for in the whole list as published in the *Chemical News* there is only one gentleman

who carries the Institute title, although most of them have it, and nearly all sport the F.C.S. It would appear that the latter title is at a discount in Bloomsbury Square, and the guinea one the favorite.

METHYLATED IODINE LINIMENT.—Referring to last week's Inland Revenue prosecutions, the *Medical Press* says that "the use of methylated spirit in solutions of iodine ought to be rigorously punished, for the combination has most markedly irritating properties on the conjunctivæ when applied to the chest." That is true. We have referred on several occasions to the objectional character of methylated iodine preparations. With the allyl alcohol, acetone, and similar bodies in the crude vegetable naphtha used for methylating, iodine compounds are formed which have a most pernicious influence upon the mucous membrane.

FATAL RESEARCH.—Dr. Henry J. Tylden, a young Oxford medical graduate, who was working on a typhoid-fever research at the Research Laboratories of the Royal Colleges, on Victoria Embankment, has died of the fever. The *Lancet* says there is "hardly room for doubt that he contracted it directly from the bacillary cultures which he was studying." Two other inmates of the building were also attacked, and one of these cases proved fatal at an early stage of the disease. Obermeier, the discoverer of the spirillum of relapsing fever, fell a victim to the disease contracted in his investigations, and Dr. Tylden's is the first case recorded where typhoid fever has been contracted from cultures of the bacillus.

A WARNING.—The *Newcastle Chronicle* has a peculiar habit of posing as an authority in scientific matters; why, it is difficult to tell. We cut the following paragraph from a recent issue:—

Yesterday, in reference to the sad case of accidental poisoning by carbolic acid at Consett, we spoke of the danger attending the use of this antiseptic, and of sodium fluosilicate as a safe and efficient substitute for it. To-day we read of a new antiseptic, the invention of a French chemist, M. de Christmas, who claims for it the properties of the best disinfectants. It is so slightly poisonous as to be without danger. It is a compound consisting of—

Carbolic acid	9 parts
Salicylic	1 "
Lactic	2 "
Menthol	0.10 "

Menthol is peppermint camphor—the camphor extracted from oil of peppermint.

It is, of course, absurd to say that this composition is "so slightly poisonous as to be without danger," and we reproduce the paragraph so that chemists may be able to give applicants for the disinfectant a warning as to its corrosive and poisonous nature.

HOW TO PROFIT BY "SCIENTIFIC MYSTERIES."—A correspondent of *The Chemist and Druggist of Australasia* writes as follows to the editor of that journal:—"A customer came into the shop a few weeks ago and asked for some liquid ammonia and sulphuric acid. On hearing he was giving a children's party at his house that evening, and wanted the articles to produce the 'penetrating smoke' experiment, I could see he had made a mistake, and showed him that hydrochloric acid was the right thing. I then showed him some other simple experiments which would amuse the children, such as nitric acid and iron-filings; the result when a mixture of chlorate of potash and sugar is touched with a glass rod wetted with sulphuric acid; showed him how to turn sugar into carbon; placed a chlorate-of-potash lozenge on end and ignited it; introduced a 'Scientific Mystery' book, and netted about 4s. or 5s. for the ten minutes' conversation, besides the sale of one of the above books. He has been a frequent customer for other chemicals

since then. It is not often that a customer comes into the shop for such materials, but it takes little ingenuity to introduce the subject, and the effect generally will be good."

This note shows how useful the little book "Scientific Mysteries" can be in promoting the chemical business. We supply it at 8s. 6d. per dozen, delivered free in the City only.

PHYSIOLOGICAL ACTION OF NITRITES.—Professors Cash and Dunstan have recently communicated to the Royal Society a second part of their physiological research on the action of the paraffin nitrites in connection with their chemical constitution. In this instance the vapour of the nitrites was brought into contact with muscle and the effects were noted. The nitrites employed were iso-butyl, tertiary amyl, secondary butyl, secondary propyl, propyl, tertiary butyl, butyl, alpha-amyl, beta-amyl, ethyl, and methyl, and so far as the connection between physiological action and chemical constitution is concerned it was observed that the action is not solely, and in some cases not even mainly, dependent on the amount of nitroxyl (NO_x) represented by the different nitrites. The secondary and tertiary nitrites are more powerful than the corresponding primary compounds. This is chiefly attributed to the great facility with which these compounds suffer decomposition mainly into the alcohol and nitrous acid. In respect of the acceleration of the pulse, the power of the nitrites is directly as their molecular weight, and inversely as the quantity of nitroxyl they contain. They, therefore, fall into an order of physiological activity which is identical with that in which they stand in the homologous series. This same relationship holds, though less uniformly, in their power of reducing blood-pressure, and of inducing muscular contraction. This order appears to be the result not so much of the direct physiological influence of the substituted methyl groups as of the increased chemical instability which their presence confers on the higher members of the series. But in duration of subnormal pressure and rapidity of muscular contraction, the activity of the nitrites is the reverse of the foregoing. In these respects the more volatile nitrites of low molecular weight, which contain relatively more nitroxyl, are the more active. A large proportion of an organic nitrite is changed into nitrate in its passage through the organism, and is excreted as an alkali nitrate in the urine. The authors consider that their results have an important bearing on the therapeutic employment of the nitrites, and they will lay their views upon this part of the subject before some other body.

NEWSPAPER SCRIBES ON THE COUNCIL'S CIRCULAR.—It is rather amusing to read the comments of the sub-editors on the circular which the Pharmaceutical Council has lately issued on the subject of the sale of poisonous proprietary medicines. We have noted a few of these. We find identical notes in the *Pall Mall Gazette* and the *Manchester Guardian*, and one slightly abbreviated in the *Western Daily Mercury*. All these authorities agree in declaring that "the enforcement of the conditions of this useful Act, together with the systematic employment of the safeguards it provides, cannot fail to contribute in a marked degree to the protection of the public against accidental poisoning." The *Sussex Daily News* and the *Eastern Evening News* also express themselves in identical terms, but their paragraph is a variation from that which appeared in the organs already named. It is herein stated that "these safeguards are evidently of great advantage to purchasers, and the authorities have shown commendable activity in dealing with what at one time gave promise of becoming a serious public danger." The carious unanimity of sentiment thus displayed suggests the suspicion that the papers might have been concocted along with the circular. There was one journalist,

however, who was not to be got at. He is on the *Evening Standard*, and evidently thinks for himself. His readers must find it a tough business to ascertain exactly what he thinks, but it is clear that he looks down on everybody with lofty disdain. After narrating briefly the Bow Street case, he says:—

Forthwith the Pharmaceutical Society swooped down and "promptly instituted proceedings against shopkeepers who were infringing the provisions of the Act." Reasoning persons in general can behold such activity with undisturbed composure, so long as Holloway's ointment and the like are assailed; but the dead-set against chlorodyne, one of the most blessed discoveries of the age, is an abuse which the uncharitable interpret, after their fashion, as trade jealousy. Anyhow, it is monstrous that a pedantic stretch of law should forbid the instant application of a remedy which the British Government has pronounced invaluable. But there are plenty of other cases as gross. Such a panic has been spread by these later proceedings of the Society that dealers in gardening appliances actually decline to sell weed-killers and insecticides. One contains acids, evidently; another is suspected of something awful; a third has been attacked and condemned, they say. The weeds on your lawn and the thrips in your houses have a glorious time under this grandmotherly administration of the law.

REVIEWS

AND

LITERARY NOTES.

Handwörterbuch der Pharmacie. Edited by A. Brestowski. Vienna and Leipzig: W. Braumüller. 2m 40pf. each part.

SINCE our preliminary notice of this dictionary (vol. xl. 404) we have received three additional parts of it, which bring the work as far as *Burtonisiren*. Considering that the dictionary is to be completed in twenty-four parts, it is evident that it is being compiled in so comprehensive a manner that the later articles must either be much condensed, or the dictionary must be considerably extended. We fancy that the latter will be the course adopted, for it would be a pity to spoil by heartless sub-editing a work which has begun so well. The dictionary is a sort of German "Cooley" scientificated—if we may use the word. Chemical formulae rather than medicinal formulae prevail, and great attention is paid in the dictionary to synthetic products, and to physiological and technical matters which have a bearing upon pharmacy. We also note that care is bestowed upon the pharmacognosy and pharmacology of drugs, while tests of all kinds, and medical and technical terms, are explained briefly but with precision. The dictionary promises to be thoroughly valuable to physicians and pharmacists who can read German.

The Tannins: A Monograph on the History, Preparation, Methods of Estimation, and Uses of the Vegetable Astringents. By Henry Trimble, Ph.M. Vol. I. 1892. Philadelphia: J. B. Lippincott Company. Small 8vo. Pp. 168.

MR. TRIMBLE is professor of chemistry in the Philadelphia College of Pharmacy, and he is well known for several researches in regard to tannins. But he does not pretend in the present volume to deal with tannins as he has studied them; the book, in fact, is the result of a bibliographical research which has extended over twelve years. Whatever the ultimate object of that research may have been, there can be no question that Mr. Trimble has done chemistry excellent service by presenting so condensed a bibliographic review of his subject as we read in this book. It is "a century of tannins," for the body which we call tannin was discovered by Deyenx in 1793, and all that has been written on the subject from that time to now is referred to in the graphic historical sketch which constitutes a large part of the volume. Gallotannic acid is the only tannin which is treated at length, and this is divided into sources, history, preparation and purification, properties, and composition and constitution of the acid. The unique feature of the

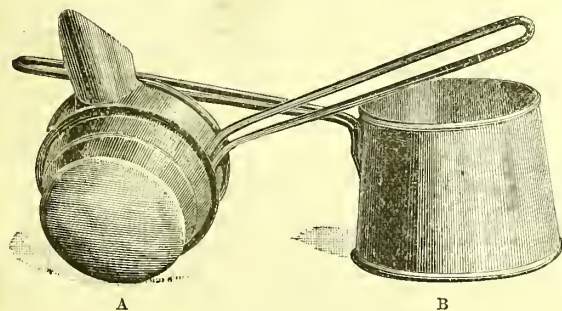
volume is the index to the literature of the tannins from 1791 to 1891 inclusive. The list appears to be remarkably complete, and its value can only be fully appreciated by those who are working in this department, which, in spite of the many researches of the past century, is far from being in a satisfactory condition, approximation in tannin assays still dominating. We have the hope that Mr. Trimble's book will help to concentrate the somewhat attenuated knowledge which exists regarding the tannins.

Ptomaines and other Animal Alkaloids: Their Detection, Separation, and Clinical Features. By A. C. Farquharson, M.D. Bristol, 1892: John Wright & Co. Imp. 8vo. Pp. 170. 3s. 6d.

HITHERTO English text-books on this subject have not been very fortunate, authors or translators having demonstrated their insufficiency in the chemistry of the ptomaines. To some extent Dr. Farquharson has fallen into the same unlucky error. This is all the more regrettable from the fact that his book is an eminently readable one, and the author gives ample evidence of a true appreciation of the importance of ptomaines in the causation of disease, and an intelligent grasp of the subject as a whole. When, however, we have said that we have practically said the best possible for his effort, as there is much evidence of want of care in the first five chapters of the book dealing with the chemistry of the ptomaines. The author is careless about spelling. He speaks of "asparagin," "*claviceps purpurea*," "arsenic and strychnia," "arsenite and strychnine," "anaerobic," "aerobic," "anaerobic," "neurin," "neurine," and so on. The descriptions of processes are such as to leave some doubt of accuracy in the chemical mind. For example, on page 36, in Gautier's method, we are told that "the sulphates of the ptomaines are extracted with chloroform, ether, or petroleum ether," but whether an alkali is first to be added or not the author does not say. Mytilotoxine is said (page 57) to be isolated "from poisonous mussels in the form of a double salt with mercury, decomposing this with *hydrogen sulphate*," &c. Is "hydrogen sulphate" sulphuric acid or sulphuretted hydrogen? We expect the latter—*i.e.*, hydrogen sulphide. The author's loose English appears in the same paragraph. On exposure to the air this ptomaine "*becomes harmless as a poison*." Elsewhere he speaks of "corpses dead of arsenical poisoning." We would suggest that Dr. Farquharson, in the next edition of the book, if there be occasion for it, should submit all the chemical descriptions to very careful revision. It is not enough to know that the chloride of this base or that has "peculiar reactions" or "special reactions"; chemists want to know what these reactions are.

A SUPPOSITORY-PAN.

MR. S. W. WOOLLEY, pharmaceutical chemist, of Dresden Road, Hornsey Lane, N., brings under our notice a neat and handy suppository-pan which is being sold in London just now by an itinerant tinman. The pan is repre-



sented in the annexed figure and is made of strong tinplate. It consists of the water-bath B, and the pan or dish A. The dimensions of B are $1\frac{1}{2}$ in. deep, 2 in. diameter at the bottom, and $1\frac{13}{16}$ in. at the top. Its capacity is fully 2 oz. It is

provided with a double wire handle $3\frac{1}{2}$ in. long. The pan A has a similar handle. This pan is $1\frac{1}{2}$ in. deep, 2 in. in diameter at the top, and $1\frac{1}{2}$ in. at the bottom. The rim round the centre does not quite meet, thus leaving an exit for steam. The spout of the pan is a special feature, being very wide and shallow. At the junction with the edge of the pan the width of the spout is $\frac{3}{4}$ in., and the depth $\frac{1}{4}$ in. The spout narrows to $\frac{1}{8}$ in. The bottom of the pan is perfectly rounded. We have seldom seen a piece of apparatus for suppository-making on a small scale so well adapted for its purpose as this. The fact of the matter is that the tinman offered a pan of the kind to a well-known leader of pharmacy in the West-end of London, who has notions of his own regarding such matters, and he thrashed the tinman, metaphorically, into putting some extra ideas into his apparatus with the result as shown. Now the tinman goes about London selling his bath and pan at 1s. It is not a big novelty, but it is a useful one.

EXTRACT OF MALT.

MR. EDMUND WHITE, B.Sc., pharmacist to St. Thomas's Hospital, communicates a note on this subject to the last volume of the "Hospital Reports." After referring to the difficulties to be met with in determining the starch-conversion value of the extract, Mr. White describes the usual process adopted for this purpose—taking a small quantity of starch in the form of mucilage, and noting the time required for its complete conversion into sugar by a known quantity of malt-extract at the body-temperature. The enormous difference in quality between the various malt-extracts now being offered to the medical profession may be seen, he continues, in the following table, which is a record of some experiments recently carried out in the dispensary of the Hospital:—

Sample	Quantity of extract taken	Quantity of starch taken	Time required for complete conversion
A	1.5 gramme	.1 gramme	3 minutes
B	"	"	10 "
C	"	"	35 "
D	"	"	$3\frac{1}{2}$ hours

These are all well-known brands, having a considerable sale, and in some cases very largely advertised. The sample D is the most expensive, but may be regarded as practically useless as a digestive agent, notwithstanding the great merit claimed for it in the advertising columns of the medical journals.

From a physiological point of view, it would be more satisfactory to determine the total quantity of starch capable of being converted into sugar by a medicinal dose of malt-extract in the time during which it may be estimated that amylolytic digestion proceeds in the stomach after a full meal, and before it is suspended by the acidity of the gastric juice. This is practically an unknown time, but 20 to 30 minutes may be taken as a fair estimate. This would indicate at once to the physician the real value of extract of malt as an aid to digestion; but up to the present no process based upon these suggestions has been published. The author is, however, engaged upon an investigation of this subject, and hopes to elucidate some of these obscure points in a future communication to the "Reports."

CURES FOR CHOLERA are floating about just now, the latest being harmless—*viz.*, citric acid. A Parisian pathologist says that $9\frac{1}{4}$ grains of the acid in about a quart of water kills the cholera bacillus, while a strength of 14 grains to the same amount of water assures absolute protection against typhoid fever. We are not convinced of that, but the result of the statement is a demand for citric acid to make lemonade. Chemists may advantageously improve the opportunity. De Carle is sure to.

THE MEDICAL STAFF CORPS.

THE article published in the Summer issue of THE CHEMIST AND DRUGGIST is a fair statement of facts as far as it goes, but I am sure if young pharmacists knew more of the actual life in the Medical Staff Corps very few of them would ever join it. I once had some experience of the Medical Staff Corps. It was short, but sufficient. I went to Aldershot. I saw, but I did not stay to conquer. I quit, as the Yankees say.

It was two years ago that I determined to change the toiling, uneventful life of a chemist's assistant for the active, stirring and manly career of a soldier. The Medical Staff Corps seemed by far the best in my case, and in that corps I enlisted. I went to Canterbury, and, as I arrived at the barracks in the afternoon too late for medical examination, I was held over till the next morning. Then

MY EXPERIENCE COMMENCED.

However, as I was lodged for the night in the dépôt of the Buffs, a Line regiment, I will say nothing of my first impressions, only one word to warn an intending recruit that in a similar case he will sleep in what is known as the receiving-room, and that if he has the same company as I had he will enjoy the conversation and pleasantries of two ploughboys, a pardoned deserter, and a young fisherman.

In the morning, with these companions, I was taken by a non-com. to the hospital for medical examination. We were marched into a small room where there were already a dozen others. Two or three were ordered to strip to their shirts and be in readiness. When their turn came they flung off their shirts and passed into an adjoining room. My turn came at last, and stark naked in a large room I had to run, hop, stand on both legs singly, turn my toes up and down, shake my leg, and show the flexibility of my arms.

Then my chest was sounded, my sight tested, my weight taken, and certain other examinations made. All this time I was in a state of unadorned nature. It took about twelve minutes, and at the end of all I was found to be

AN INCH TOO TALL.

Now, that is my first point. The Medical Staff Corps is not a corps of fine physique; 5 ft. 4 in. is the maximum height, and though, as in my case, a "special" order may be obtained for enlistment, still the tendency is to secure the best material for the combatant portions of the army, leaving the more stunted men to join the Medical Staff Corps.

Declared fit I was next enlisted, and on the following morning sent to Aldershot.

V and Z lines, South Camp, Aldershot, are rows of wooden huts. Each hut, I think, accommodates twenty men. It is tarred or painted outside and whitewashed within. They are roughly built and the wind whistles through cracks in a most uncomfortable manner, particularly noticeable when you are in bed. The beds range round the room, which is not divided in any way, and is of such a size as to allow of about 2 feet space between each bed. For the bed itself I will say that once a man gets accustomed to a straw shock there is nothing so comfortable.

It would not be interesting to trace the various regular duties of the day. It is quite fair to say that they are not in any great degree laborious, and that, compared with the ordinary working hours of a civilian, a soldier has

MUCH SPARE TIME.

But that advantage, which is the great inducement to hard-worked assistants, must not be over-rated, for it is counterbalanced by many drawbacks.

To begin with the men. It is a mistake to suppose that those of the Medical Staff Corps are superior to those of other departments. There are some, indeed, who keep fairly free from the prevailing blackguardism, but not nearly enough to leaven the whole. Many, on the other hand, are the lowest of the low, and with these you must associate. Moreover, by your profession you are their equal, and they will treat you as such. Their whole life and conversation is vicious, and though this may not sound so distasteful to many young fellows, yet they will soon discover that there

is nothing alluring in the brutal vulgarity of the barrack-room, but that, on the contrary, it is

REVOLTING AND DISGUSTING.

One of two things—you either live in an atmosphere which is unsuited to you, or you settle down to an extremely low level. In justice I must say that this habitual coarseness of expression is not usually due to any premeditation, but to ignorance. Again, there is a general *esprit de corps* which is worthy of imitation in civilian life, and would be pleasing if it united one to more congenial companions.

Honesty is not a strong point with the average soldier. There are no cupboards in a barrack-room; all your outfit is placed on a shelf above your bed. If a soldier loses his brush or what not, he takes yours, and you have to replace it or steal one from somebody else.

Then with regard to the food. It is coarse, coarsely cooked, and coarsely served. You can get enough if you like to eat a large quantity of dry bread. Of course, everyone knows that a soldier has to rough it in the matter of food. Still, it is generally necessary to supplement the rations by private expenditure, and this takes a fair share of the boasted "clear pay."

As to duties, there is much which no recruiting officer would ever tell an "aspirant to medico-martial honours." Cleaning is a very large item with a soldier, and occupies much of what is known as his "spare time." Whilst training in the dépôt you have to scrub floors and tables, clean windows, wash up, and empty slops; or you may do "pioneer duty," which is a fine name for

SCAVENGING IN THE BARRACKS.

In addition to all this, the cleaning of arms and accoutrements is a tedious job, and one that must be done with the greatest care. Usually after three months in the dépôt hospital work commences. As a ward orderly the cleaning business goes on. If you can bully well, you can get it all done by the patients, but otherwise you must scrub, dry scrub, and polish with all your might, for you are mainly responsible for the cleanliness of the ward. Again, the great majority of patients in military hospitals are suffering from venereal complaints, and what little bandaging you may have to do is by no means bad work.

Lastly, as to the treatment of soldiers by civilians: there is much that will hurt any decent fellow. If you get into a railway carriage where there are ladies, they will probably get out. On the other hand, the filthiest blackguards in the land will be most familiar, and ask or offer matches and tobacco in the tone or manner of strict equality. And for the matter of promotion it is better for a respectable and well-informed young fellow to join a Line regiment, where, by good conduct and superior bearing, he may rise to be sergeant-major or even quartermaster before he could get three stripes in the Medical Staff Corps.

However, I know how difficult it is to try and stop a young man from enlisting when once he has taken military fever. If he is determined, I will give him one final word of advice. Go to enlist on pay-day or the day after. At other times of the week Thomas Atkins is prowling about, longing for beer and tobacco, and absolutely innocent of money. A recruit is generally for a day or so left *en civile*, and is hence surrounded by a thirsty and by no means bashful company, who insist on his "standing his footing." I was.

MILES QUONDAM.

SUICIDE OF A CHEMIST AT HULL.—On Wednesday evening a man named Bruno Behrandt, a chemist belonging to Southampton, staying at the London Hotel, Hull, was about to be arrested for fraud and debt, when he asked the detective to allow him to go to his bedroom to get his bag to pay his bill. This he was allowed to do, the officer accompanying him. Behrandt then went to a closet, the detective remaining outside. The door was kept partly open. Behrandt suddenly shut the door and bolted it. The detective immediately burst it open, and found Behrandt on the floor, bleeding from the mouth. A doctor was sent for; but the man was dead before he could arrive, death having evidently been caused by some powerful poison.

Practical Notes and Formulae.

PHOSPHORUS PASTE.

THE following curious method of making phosphorus paste for mice and rats is given in *Pharmac. Tidsskr.* Five drachms of phosphorus and 75 grains of sulphur in coarse powder are put in a mortar under water, and combination into P₄S is promoted by rubbing together for fully an hour. Then the mortar is filled up with cold water so as to cool the product. When this is done most of the water is poured off, and a paste made by adding 10 fl. oz. of treacle, 10 fl. oz. of glycerine, and 16 oz. of rye-flour.

PRESERVATION OF HYPODERMIC INJECTIONS.

MR. THOMAS J. KEENAN communicates the fact to the *American Druggist* that of the various chemical bodies known to exert an inhibitory action on the development of the fermentative and fungoid growths which occur in simple solutions of the alkaloids prepared for hypodermic use, and in solutions of organic chemicals generally, acetanilide, from the consideration of its non-irritating properties and its efficiency in weak solution, easily takes first place. But Mr. Keenan does not say how much. We should think that a grain to 1 oz. is sufficient.

CHILDREN'S DUSTING-POWDER.

THE following is recommended by a Swiss journal:—

	Parts
Burnt alum	15
Boric acid	15
Precipitated chalk .. .	150
Starch	250
Carbolic acid	3
Oil of lemon	a sufficiency to perfume.

Mix well.

GUTTA-PERCHA TOOTH-STOPPINGS.

IT is the opinion of Dr. R. Ottolougin that as a permanent filling gutta-percha may frequently be depended upon. Either the white or the pink may be used, but the pink is more durable, and in conspicuous places it is to be preferred. Much of the reported failure of gutta-percha as a permanent filling may be referred to faulty manipulation or injudicious choice of the cavity in which to place it. So far as manipulation is concerned, the common practice of heating the material in the flame is ruinous to all hope of permanency. It should be heated on a porcelain disc held over the lamp, or preferably over warm water on a glass tray. In placing gutta-percha in a large cavity, it may be packed piece by piece, thus insuring adaptation to the walls, until two-thirds of the cavity is filled. Then a single piece large enough to complete it should be used. In smaller cavities a single piece should be chosen large enough to slightly more than fill the cavity. After the filling has cooled and is hardened, the surplus should be trimmed off with a thin smooth burnisher, or spatula, slightly warmed, care being used not to drag the material away from the walls.

BISMUTHI CARBONAS.

IN a recent issue of *Guy's Hospital Gazette* Mr. H. Collier says that carbonate of bismuth is now employed instead of the subnitrate in the preparation of mist. bismuthi sedativa and mist. bismuthi of the new *Guy's Hospital Pharmacopœia*. The chief advantage possessed by the carbonate is that it is compatible with alkaline carbonates, whereas with the subnitrate a slow decomposition with evolution of CO₂ occurs. The old mist. bismuthi sed. was open to the objection that unless it were allowed to remain some hours after being mixed, in an open vessel, so as to allow the decomposition to be entirely completed, and the CO₂ to escape, it was not safe to put it into a bottle. The carbonate is not quite so heavy as the subnitrate. It can be easily diffused in a mixture, and even after long standing can be readily shaken up. Authorities are divided in their opinions as to the rôle played by insoluble bismuth preparations in dyspepsia. If absorption is desired, there can be no doubt but that the carbonate is better than the subnitrate; at any rate in a test tube it is much easier to dissolve in dilute HCl the former than the latter.

SOLUBLE ESSENCE OF GINGER.

The *Druggists' Circular* gives the following formula devised by Mr. A. C. McBride:—

Ground Jamaica ginger	2 lbs.
Powdered pumice stone	2 ozs.
Slaked lime	2 "
Proof spirit sufficient to make	64 "

Rub the ginger with the pumice stone and lime until thoroughly mixed, then moisten with proof spirit until perfectly saturated; afterwards place this mixture in a narrow percolator, being careful not to use any force in packing; simply place it to obtain the position of a powder required to be percolated so that the menstruum will go through uniformly. Lastly add proof spirit, and proceed until 4 pints of the fluid are obtained. Allow the percolate to stand for twenty-four hours, and filter if necessary.

LIQUEFACTION OF SOLIDS.

AT a recent meeting of the Indiana Pharmaceutical Association Mr. Moffitt submitted the following prescription for criticism:—

	Grains
Cocaine hydrochlorate	10
Salicylic acid	30
Phenacetin	30
Exalgin	30

Mix. Make capsules No. 20.

"What causes the above to become liquid when rubbed together?" This was a stunner, and no one present was prepared to give an intelligent answer. Theories were advanced by Remington, Hurty, Eliel, Ebert, and others, but nothing positive was known.—*Indiana Pharmacist*.

GREEN IODIDE OF MERCURY AND SYRUP OF IODIDE OF IRON.

WHEN mercurous iodide, which in itself is insoluble in water, is mixed with a solution of potassium iodide, the salt undergoes decomposition, mercuric iodide being formed, which is dissolved by the excess of potassium iodide, while metallic mercury in finely-divided form is deposited; this same reaction occurs when mercurous iodide is mixed with the syrup of ferrous iodide, and the finished product may then be considered as a syrup of the iodohydrargyrate of iron with metallic mercury. Mercurous iodide yields practically two-thirds of its weight of mercuric iodide, which, in view of the dosage, is a very serious matter.—*Pharmaceutical Review*.

FLAVOURS FOR TOBACCO.

1. Tincture of valerian, 11 parts; rectified spirit and tincture of Tonka bean (1 in 8), of each 2 parts.
2. Tincture of valerian, 2 oz.; butyric ether, 2 oz.; essence of vanilla (1 in 10), 1½ oz.; rectified spirit, 20 oz.; water, 40 oz.
3. Cascarilla, 6 oz.; valerian-root, 3 oz.; and Tonka bean, 1 oz.—macerated in 2 pints of rum for a week, and filtered.
4. Valerianic acid, 5ij.; acetic ether, 40 drops; butyric ether, 10 drops; rectified spirit, 60 oz.

We reproduce these formulæ, with slight modification, from an American contemporary. We are not sure, however, how far it would be legal to use these in this country.

MEDICATED LOZENGES.

IN the manufacture of medicated lozenges it is customary for the ingredients to be mixed by one who is skilled in compounding, and he passes on the mixture to those who roll and cut the lozenges. The men who do that are paid according to the number they make. Each man is supplied with a quantity of the mass which he is to make into lozenges. The bulk of this he keeps in an earthenware jar, covering it with a damp cloth; the rest is placed upon his bench, in which a slab of slate is embedded. A portion of the mass is rolled out with a heavy brass roller, each end having a ridge, which gives the proper thickness to the sheet. When this is obtained, the man takes his cutter (made of tin, but faced with a steel edge), and dexterously cuts out the lozenges in a row, wiping the cutter at the end of each row. Each lozenge is then stamped with the lettering desired, and after a trayful is made the tray is placed in a drying-rack, the final drying being done in a hot-air chamber.



Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., August 17

The London Markets.

The Californian Quicksilver Trade.

The American quicksilver mines, as might be expected, are controlled by a "combine," which appears to carry on its business in as vicious a manner as these detestable organisations are wont. Formerly the States exported their quicksilver to many of the Spanish American republics, but under the "combine" these neutral markets have been all but lost to the Europeans. But at home, where the monopolists are well protected by duties from foreign competition, they fleece consumers to their hearts' content. The Pacific Coast miner must pay \$44 per bottle for the same mercury which is offered for export at \$36.50. "It looks," says a Californian correspondent of the *Cil, Paint, and Drug Reporter*, "as though under the present condition of affairs our quicksilver producers should have soon to abandon most of the trade with the outer world. Our home market cannot be advanced above a certain figure, or we shall, as we have been even this year, be faced by Spanish quicksilver in our own market. The production of American quicksilver for the half-year ending July 1, 1892, has been 17,800 flasks; for the same time in 1891, 13,300 flasks."

Fiji Vanilla.

We have more than once called attention to the increasing cultivation of vanilla in Fiji. The *Chemist and Druggist of Australasia* now reports that not long ago Mr. Leslie E. Brown, of Fiji, sent to Messrs. Langton, Hicks & Brothers, of London, a consignment of vanilla. The following letter has since been received by Mr. Brown from the consignees:—

DEAR SIR,—In sending you account of sales of your first consignment of Fijian vanillas, we must congratulate you on price realised, viz., 22s. 6d. per lb., for three-fourths of consignment, and 21s. 6d. for remaining one-fourth. Unless quality had been very satisfactory, no such price could have been obtained, and if further consignments are up to quality now sent in, we can say that Fijian vanillas will command a good price and a great sale. Speaking from an experience of nearly forty years, during which we have handled a considerable quantity of vanillas, we can unhesitatingly say that the quality of that sent here is equal to any vanilla grown in the Mauritius or elsewhere. . . . The beans are plump and well cured, and are beginning to throw out splendid crystals. In future consignments it will be necessary to sort the vanillas, and tin them according to lengths, and take care not to pack the tins too closely.

According to reports from Fiji, we may expect a further considerable growth in this article of export from the islands.

Anise in Cyprus.

The cultivation of anise has of late been taken up with activity in the island of Cyprus. It was one of the products of the country which, after the British occupation, was exempted until further notice from the payment of tithe. The tithe received at that time (1881) amounted to less than 2l. a year. Since 1837, however, the plant has been cultivated largely in the Nicosia district, nearly 5,000 donums of land

being brought under anise-cultivation. The Commissioner of the Nicosia district now reports that upon ordinary land anise yields a crop of from 30 to 80 okes the donum, and where the land is irrigated and manured as much as 300 okes the donum. He states that it is a most profitable cultivation, giving a far greater profit than cereals. The yield in 1890 was about 194,000 okes. It is exported to France, Italy, and Syria, where it is used for distilling purposes, for flavouring liqueurs, &c. What is consumed in the island is used for flavouring mastic. The quantity exported in 1890-91 amounted to 91,158 okes, valued at 2,039l.

The cultivation having thus increased, and anise beginning to take the place of other cultivations, the Government reimposed the tithe, the taking of which, however, was subsequently limited to exported anise.

Lead-free Citric and Tartaric Acids.

With regard to the statement in our Editorial note of last week that it was the intention of the wholesale druggists to continue to supply such of their customers as wished for it with "ordinary commercial acid," instead of with that standing the B.P. test, we are informed that at a meeting of the "Drug Club" held some days before the committee meeting of the chemical trade section of the London Chamber of Commerce, the following resolution was adopted:—"That this meeting of the club recommends that wholesale druggists should from this day buy only tartaric and citric acid that can or shall be guaranteed to pass the British Pharmacopœia test, and that in their prices-current, from this date, it is suggested they shall quote such citric and tartaric acid only that will conform to the above test." What we were told before was that the druggists would supply B.P. acids to their customers as a matter of course, unless the latter expressly stated that they wanted the commercial acid, and that they required it for other than pharmaceutical or dietetic purposes. The resolution, it will be seen, admits of no exception at all.

ACID (CITRIC).—According to some dealers, a rather better feeling prevails in the market. The B.P. acid may still be had in small quantities at 1s. 5d. per lb., but the makers are inclined to raise the quotation.

ACID (TARTARIC).—Unsettled, but inclined to slightly more firmness at the close, after declining during the week. English tartaric (B.P.) is offering at 12½d. per lb. on the spot; good commercial, in second hand, at 11½d. per lb.; and foreign 11¼d. per lb.

ALOES.—Twenty-seven cases have come to hand from Mossel Bay by the *Conway Castle*. The reduction in the export of aloes-juice from Curaçao (or rather, the neighbouring islands of Aruoa and Bonaire, where the whole of the drug is now produced) has been very considerable. The total value of the exports was 42,320 florins in 1890, and 29,855 florins in 1891.

ARROWROOT.—The market is quiet. Of 360 barrels of St. Vincent offered at auction, 30 barrels sold at 4¼d. per lb. for good quality.

ARSENIC is scarce, and firm at 12l. 5s. 6d. per ton for best white powder.

BOLDO LEAVES, of which the supply is small, are offering at 8½d. per lb., c.i.f. terms, for good genuine green quality.

BORAX.—Crystals are steady at 29s. to 30s.; powder at 30s. per cwt. Boracic acid is firm at 40s. per cwt. for good quality—not 31s., as quoted last week.

CANARY-SEED.—The sudden and rapid rise in the price of this article has not been equalled for over fifteen years. The greater part of the demand on this occasion has been from the United States, and we are at this moment left with a very small stock. The new crop of Dutch seed is said to be a total failure, while with regard to that from Turkey contradictory rumours prevail. The present prices are about 85s. for old Spanish, and 60s. for English and Dutch. Yesterday 200 bags Turkish seed sold at 72s. 6d., and 200 bags Barbary at 71s. to 72s. 6d. per cwt.

CANTHARIDES.—The new crop of *Russian* flies is now arriving. Fair natural quality is still offering at 2s. 10d. per lb., c.i.f. terms.

CEVADILLA-SEED is very firm. The quotation now is 122s. per cwt., c.i.f. terms, for ordinary, and 10s. more for sifted seed.

CINCHONA.—Up to the present, 1,721 packages of bark have been announced for sale at next Tuesday's auctions. They include 919 packages Ceylon and East Indian, 110 Java, 40 African, 329 South American Calisaya, and 323 Cuprea. The exports from Ceylon between January 1 and July 25 are as follows:—1892, 3,502,272 lbs.; 1891, 3,044,102 lbs.; 1890, 4,757,968 lbs.; 1889, 5,173,737. A large portion of this season's excess over 1891 comes, it is said, from the Badulla district, and is probably bark containing over 3 per cent. of sulphate of quinine. It does not pay to ship the common red bark at the present rate per unit.

CLOVES.—There has been a better demand for *Zanzibar* cloves, of which 700 bales for January-March shipment sold at 2½d. per lb. this week. At auction on Wednesday the price was also about ½d. per lb. higher, and 187 bales medium sold at 2½d. per lb. Two barrels *West Indian* cloves brought 2½d. per lb.

COCA.—There has been an import of 29 bales of coca-leaves from Batavia per *Hector* this week.

COCCULUS INDICUS.—Offering rather plentifully. The value is about 8s. 6d. to 9s. per cwt.

COPPER (SULPHATE).—The market remains quiet. Best Mint is quoted at 14l. 10s. in London, with sellers; good brands in Liverpool at 14l. 15s. to 15l. per ton.

CREAM OF TARTAR again lower, at 84s. per cwt. for best white French crystals.

CROTON-SEED.—There is hardly anything offering at present in this article, which is nominally quoted at 15s. to 17s. per cwt. for fair quality; but as the demand is practically nil the want of supply is not felt.

CUBEBS.—The *Hector* has brought 111 bags cubebs and 170 bags cubeb stalks (the latter in transit) from Samarang (Java) this week.

CUMIN-SEED.—The first arrivals of this season's *Italian* seed have been received, and show a fairly good quality. *Morocco* seed is still cheap.

GAMBIER.—The market remains firm, and about 50 tons old landed, in whole bales, have sold at 18s. per cwt.

GAMBOGE.—In Saigon, on July 16, there was a small stock of first-class, and no supply at all of second-class gamboge.

GINGER.—The market is very flat and tame, and hardly any business is reported. The supply at auction this week was small, and only 25 barrels of *Jamaica* root sold at 47s. to 48s. per cwt. for dull lean scraped, which is rather easier.

GUM ARABIC.—There has been rather more inquiry for sorts in Liverpool, and several packages have changed hands at 90s per cwt. during the last few days. At last week's London gum sales several packages of newly imported *Ghesirah* gum were shown, but all bought in, owners demanding very high prices.

GUM ASAFOETIDA.—There has been a fair demand privately for common qualities, and sales have been made at 18s. to 20s. per cwt.

GUM GUAIACUM.—In the year ending September 30, 1890, the exports of guaiacum gum from Hayti were 36,671 lbs.; in the year from October 1, 1890, to September 30, 1891, they were 510,600 lbs.

GUM TRAGACANTH.—The demand is good for all qualities except fine druggists', and at last Friday's periodical sales a fair proportion of the 717 packages offered sold at full to rather higher rates—viz., fair firsts, 9l. 10s. to 9l. 15s.; good seconds, 8l. 17s. 6d. to 9l. 2s. 6d.; ordinary ditto, 8l. to 8l. 15s.; good to fine thirds, 7l. to 7l. 15s.; and fine pink at 7l. 15s. to 7l. 17s. 6d. per cwt. *Hog* gum brought from 47s. 6d. to 62s. 6d. per cwt.

HONEY.—There have been large arrivals of *Chilian* honey.

IPECACUANHA.—The arrivals of Carthagena root still

continue. Nineteen packages were received from Colon this week by the *Don*.

KAMALA.—Good quality Bombay kamala is selling at 7d. per lb.

LIME JUICE.—The recent scarcity is likely to be converted into over-supply soon. The *Don* this week brought no less than 138 packages lime-juice from Dominica.

LINSEED shows a very firm tone. The present quotations are 54s. to 56s. for *Sicilian*, 40s. to 42s. for *East Indian*, and 39s. to 42s. for *River Plate* and *Russian*—all per 416 lbs.

LYCOPODIUM.—Prices are rather lower, and sifted *Russian* is now offering at 1s. 7½d. per lb., c.i.f. terms.

NUX VOMICA is very plentiful at present, and prices are scarcely maintained.

OIL (CASTOR).—Efforts are being made in Cape Colony to introduce the cultivation of the castor-oil plant, but thus far the response of agriculturists to the promoters' appeal has been but slight. "I should say," writes the Port Elizabeth man, who is interesting himself for this culture, "that at least 500,000 gallons of 'castor-oil' are annually imported into this colony for machinery and medicinal purposes, the cost of which goes into the pockets of foreign producers, while, providing the proper seed is produced, the demand would be found practically unlimited."

OILS (ESSENTIAL).—Fair native brands of *Lemongrass* oil may be had at 1½d. per oz., while *Citronella* remains neglected at 1½d. per oz. on the spot. Japanese *peppermint* oil has been in strong demand, and sales here have been made at 6s. per lb. on the spot for ordinary commercial brands.

OPIUM.—Our Smyrna correspondent writes, under date of August 6:—"The party who bought the opium mentioned in my telegram of August 3 for America, was unable to complete the total quantity required by his principals, and since the date of the message 20 cases of current *Talequale* have been sold at the equivalent of 6s. 4½d. per lb. f.o.b., and 3 old selected *manufacturing* from 6s. 6d. to 6s. 8d., and there are still several buyers at these quotations who as yet have not been able to induce holders to sell. It now remains to be seen whether the consuming markets will respond to the advance on this side; but whether they do or not, there is no chance of our sellers lowering their pretensions for some time to come.

ORRIS.—Sales are reported to have been made here since our last report at prices higher than those quoted there—viz., 112s. 6d. per cwt. for fine selected *Florentine* root. Good *Verona* orris is held for 60s. to 65s. per cwt. It is stated that the coming crop is again likely to be small.

PEPPER.—*White pepper* has been a good deal more active lately, and prices are higher on the spot. Singapore sold privately before the auctions at 4½d. to 4¾d. per lb. At auction 192 bags Singapore were all disposed of, with competition, at 4¾d. to 4¾d. per lb. for good to fine bold, and 6¾d. per lb. for superior bold bright. Penang pepper was not offered. For delivery a good deal of business has been done at rising prices, but the market closes easier. *Black pepper* is quiet on the spot, and nearly the whole of the supply at auction was bought in, only 39 bags Singapore selling at 2¾d. to 2¾d. for ordinary grey to fair. *Long pepper* (36 baskets Singapore) sold at 13s. 6d. per cwt.

PIMENTO is rather firmer, and holders do not care to sell at the present rates. Ordinary to fair clean realised 2½d. to 2¾d. per lb. at auction.

POTASH SALTS.—*Chlorate* is dull of sale, and may now be had at 6½d. per lb. on the spot, or at the same price, f.o.b. Liverpool, for forward delivery. *Prussiate*, yellow foreign, is held for 10½d.; English for 10¾d. per lb. *Bichromate* firm at 4½d. per lb. English refined *Saltpetre* is held for 20s. 9d. to 21s. 9d., according to packing; German for 20s. 6d. to 21s. 3d. per cwt.

QUICKSILVER.—On Monday, after selling a considerable quantity, the chief importers reduced their price to 6l. 15s., which is still their quotation. Second-hand holders are more or less nominal to-day at 6l. 14s.

QUININE.—Market firm. There is not much business doing, but there are no sellers of second-hand German bulk

below 9d. per oz. We understand that several thousand ounces changed hands at that figure early this week, but the details of the business are kept very quiet.

SANTONIN.—The price has been advanced to 5s. 9d. per lb. for good Russian crystals.

SENNA.—The new crop is beginning to arrive. The *Carthage* has brought 278 bales from Bombay.

SHELLAC.—The market opened quietly at 83s. for orange TN, October delivery. At auction 703 cases shellac were offered, of which 517 sold, with good competition, at an advance of 2s. to 3s. on *Button* lac and about 1s. per cwt. on *Orange* lac. The prices paid were as follow:—First *Orange*, worked, rather cakey, 91s.; fine unworked second orange, 83s. to 86s.; good fair to good ditto, 79s. to 82s.; cakey and livery to fair ditto, 76s. to 79s. per cwt. *Button* lac, good first, 91s. to 92s.; fair to good second, 81s. to 85s.; thirds, 78s. per cwt. For AC garnet lac an offer of 75s. was refused. Since the auctions higher prices have been paid for delivery—viz. 84s. for September, and 84s. 6d. for October, November, and December orange TN. About 800 cases sold at these prices.

SODA SALTS.—*Nitrate* is steady, at 9s. to 9s. 1½d. per cwt. for refined, and 8s. 6d. to 8s. 7½d. per cwt. for ordinary qualities on the spot. *Caustic* remains steady: 70-per-cent. white on the spot costs 10l. 10s. to 10l. 12s. 6d. in London, and 10l. 5s. in Liverpool or on the Tyne; 60-per-cent. spot, 9l. 2s. 6d.; and 76-77-per-cent., on the Tyne, 11l. 10s. per ton. The London manufacturers of *Soda Crystals* want 68s. 6d. Other brands are offering here at 70s., landed terms, or at 67s. 6d. ex ship. The Tyne price is 60s. per ton. *Bicarbonate* is held for 6l. 15s. to 7l. 5s., ex warehouse, according to packing. *Bichromate* steady, at 3¾d. per lb.

TURMERIC.—The market keeps firm, and of *Madras* root there is hardly anything to be had at present. Holders of split *Cochin* bulbs will not sell for less than 9s., while for fair *Bengal* finger 20s. per cwt. must be paid. It is said that a considerable amount of business has lately been done in *Bengal* root for arrival, but no prices have been divulged. At auction 290 bags split *Cochin* bulbs were offered, but, failing suitable bids, bought in.

Thursday's Market News.

42 CANNON STREET, E.C., August 18.

ALOES.—*Curaçao* aloes was in somewhat larger supply at to-day's auctions than it has been for several weeks. Of 186 packages, 51 sold at from 8s. 6d. to 14s. 6d. for common overheated to fair capey. There was also a lot of good brown picked liver aloes, which was bought in at 55s. The demand remains very slack. *Cape aloes*: A parcel of recent arrival, including some very fine aloes, was to be offered to-day, but was not reached until the end of the sales. Privately fine bright *Cape* aloes has been selling, it is said, at 25s. to 25s. 6d. per cwt. recently, but the holder stated that he would now take 24s. for the same description. Some fine, rather soft *Socotrine*, of good colour and flavour, was also to be sold to-day. The same kind realised from 5l. to 5l. 10s. privately lately.

ANISE.—*Cbina* star-anise still remains very scarce. At the auctions to-day 3 cases, rather mixed and somewhat deficient in flavour, were bought in at 120s. per cwt.

ANNATTO.—This drug is quite neglected. For some seeds of rather dull appearance 1½d. per lb. would be accepted, but that was not obtainable.

ARECA-NUTS.—Seventeen bags from Colombo were bought in at to-day's sales at 35s. per cwt.

BALSAM COPAIBA.—Holders here are very firm, as already reported last week, and will not sell good *Maranhão* balsam below 2s. per lb. At auction 3 casks *Pará* balsam, pale and watery, were bought in at 1s. 10d. per lb. Four casks of good appearance, by "land carriage," were bought in at 2s. per lb.

BALSAM TOLU.—Six cases were bought in to-day at 1s. 3d. per lb.

BUCHU.—Slightly dearer to-day, and in continued demand. Fourteen bales were offered, and sold at 4½d. to 5d. per lb. for

rather yellowish to fair green round short leaves. This is an advance of about ½d. per lb.

CANELLA ALBA.—This article has been rather scarce lately. At to-day's auctions 10 bales, just received *via* New York, fair bright pale, but somewhat broken quill, were bought in at 30s. per cwt.

CANNABIS INDICA.—Dull and difficult of sale, even at low prices. Very dusty but fairly greenish tops were bought in to-day at 3½d. per lb. Seventy-four robbins of fair greenish tops were bought in at 5d. per lb.; ordinary brown ditto at 3½d. The demand is slack.

CARAWAY.—It now turns out that the Dutch crop generally is of good quality, but rather small as regards output. The lowest price at which seed (old crop) has been sold lately was 18s. 6d., but new is now held for 19s. per cwt., with a rising tendency.

CARDAMOMS.—In large supply, about 220 packages being offered at the auctions. At the time when our report left, forty-nine cases had been sold at very full prices for fine grades, but at rather easier rates for ordinary and medium kinds. *Mangalore*—small to medium fair round yellowish were bought in at 2s. 4d. *Ceylon Mysore*—fine bold pale sold at 3s. 10d.; medium to bold ditto, partly split, at 3s. 3d. to 3s. 2d.; small to medium rather yellowish, at 2s. 5d. to 2s. 6d.; medium yellow, 1s. 11d.; small fair round palish, 1s. 7d. to 1s. 9d.; very small pale, 1s. 1d.; mixed sizes, rather brown and partly mouldy, 1s. 3d. to 1s. 1d. per lb. *Ceylon Malabar*—pale, medium to bold round rather greyish, 2s. 3d.; small to medium pale, partly specky, 2s.; small to medium rather brownish, from 1s. 7d. to 1s. 5d.; very small brown, 1s. 1d. per lb. *Seeds* were slightly easier, selling at from 1s. 4d. to 1s. 5d. per lb.

CASCARA SAGRADA.—Forty bales were bought in to-day. The quality is good, but rather small. It appeared that a bid of 24s. per cwt. was made, and refused.

CASCARILLA.—There is no change in values to report. Of 47 packages offered to-day, 34 sold at 32s. 6d. to 33s. for fair bright quilly, and from 29s. 6d. down to 20s. for fair bold grey mixed to ordinary brown and dusty.

CHAMOMILES.—New Belgian flowers have now declined to from 76s. to 77s. 6d. per cwt. for good quality of the first picking; they are now at that price, and in some quarters an advance is looked for. Second pickings are not yet collected, but will shortly be, and are expected to begin at 65s. to 70s. per cwt. At auction 10 bales chamomiles, ordinary brown flowers, sold cheaply without reserve at 15s. per cwt.

CINCHONA.—A new consignment of about 180 packages Crown bark from South America has been landed this week. There have been no arrivals for a considerable time. At to-day's auctions only a few lots of quill and flat Bolivian *Calisaya* were offered, and bought in at more or less nominal prices. A few bales of so-called South American red bark in quills, all damaged and of dull colour, were bought in at from 2s. 6d. down to 1s. 3d. per lb.

CIVET is quite neglected. Several parcels shown to-day were all bought in at 7s. 6d. to 8s. per oz. nominally.

COCAINE.—Crude is stated to be 6d. per oz. dearer, sales being reported this week at 11s. 6d.

COCCULUS INDICUS.—Dull and neglected. A parcel of 41 bags was bought in to-day at 9s.; the price would probably be 8s. 9d.

COWHAGE remains almost unsaleable. At to-day's auctions the usual large quantity of stony stuff was shown, and bought in at nominal prices—about 2d. per oz. mostly—but the value is nearer ½d. per oz.

CUBERS.—The market is tending lower. At to-day's auctions 15 bags from Batavia were bought in, but an offer of 6l. 7s. 6d. per cwt. is to be submitted for small brown very stinky berries.

CUTTLE-FISH.—An offer of 2½d. was accepted for five cases fair pale bold from Bombay.

DILL-SEED.—Twenty bags good East Indian sold to-day at 11s. to 11s. 6d. per cwt.

DRAGONS'-BLOOD.—Ordinary lump is rather scarce, and has been inquired for. Very fine qualities also are difficult

to procure, and sell at extreme rates. At to-day's auctions an offer of 10*l.* 10*s.* per cwt. was refused for one case of very fine fiery saucer. A case of dull finger in reed sold, subject to approval, at 97*s.* 6*d.* per cwt.

ERGOT OF RYE is decidedly firmer, holders being much less disposed to sell. New Spanish on the spot was quoted previous to the sales at 2*s.* 2*d.* per lb., transactions having been concluded privately at 2*s.* 1*d.* At auction, however, 2*s.* 2*d.* was refused for the best lots, the owners standing out for 2*s.* 3*d.* Twelve cases old and wormy ergot sold at from 1*s.* 6*d.* to 1*s.* 11*d.* per lb.; new German is offering at 1*s.* 11½*d.* per lb. c.i.f. terms, or 2*s.* 1½*d.* on the spot.

GALLS.—Fair *China* galls on the spot are held at 50*s.* per cwt. nominally, but there is no business worth speaking of. *Turkey* galls are rather dull of sale, blue Bassorah being quoted at 60*s.*, green at 55*s.*, and white at 50*s.* per cwt.

GAMBOGE.—A parcel of 13 cases, newly arrived, sold to-day at a reduction in value of from 25*s.* to 30*s.* per cwt.; good bright Singapore pipe, rather broken, bright fracture, slightly drossy, at 11*l.* 10*s.* to 11*l.* 12*s.* 6*d.* per cwt. Fifteen cases good pickings brought 11*l.* per cwt. Altogether 72 cases were offered, 28 of which found buyers.

GUARANA.—One case fair ordinary sausage was bought in at 4*s.* to-day; an offer of 3*s.* 6*d.* would probably not be refused.

GUM AMMONIACUM.—Utterly neglected and almost unsaleable. The only lot sold to-day consisted of 2 cases drossy seedy grey block, for which 20*s.* was accepted.

GUM ARABIC.—For 5 cases Kurrachee Amrad good amber coarse siftings a bid of 56*s.* was refused. Nine bales old Turkey sorts, from Alexandria, fair yellow to amber drop, were bought in at 95*s.* per cwt.

GUM ASAFOETIDA.—Two cases fine almondy gum, *viâ* Bussorah, were bought in at 70*s.* per cwt. to-day.

GUM BENZOIN.—*Siam* gum is decidedly cheaper, a parcel of 12 cases small to medium almonds in block, fairly good bright colour, selling at 8*l.* 17*s.* 6*d.* (a reduction of about 15*s.* per cwt.); and small ditto, rather more broken, at 8*l.* to 8*l.* 7*s.* 6*d.* per cwt. Thirty-five cases rather dull, streaky siftings, in block, sold at 80*s.* to 89*s.* per cwt. *Palembang* gum is just a trifle easier, medium to fair almondy block realising from 30*s.* to 40*s.* per cwt. Of *Sumatra* gum hardly anything was offered.

GUM ELEMI.—There is rather too much on the market at present, and holders cannot get the prices at which they sold lately. To-day a parcel of 50 cases fair pale Manila, good flavour, slightly dark mixed, was bought in at 45*s.* to 46*s.* per cwt.

GUM GALBANUM.—Fifteen packages of the spurious gum which has been offered on several occasions as "opoanax" were now placed on sale without reserve as gum galbanum. They showed a reddish-orange coloured blocky gum, and were bought in without a bid being made for them.

GUM GUAIACUM.—The recent arrival proves to have been of very inferior quality, and of the 40 boxes offered to-day only one was of fine bright quality (block). This sold at 2*s.* 8*d.* per lb.—a very high price—and for fair block, 1*s.* 8*d.* per lb. was paid. The remainder was also disposed of, ordinary drossy block at 7*d.* to 10*d.*, very common and barky ditto at from 5½*d.* down to 3½*d.* per lb.

GUM MYRRH declined from 7*s.* 6*d.* to 10*s.* per cwt. to-day; good Aden sorts selling at from 80*s.* to 82*s.* 6*d.*; coarse chips, 60*s.*; and woody pickings at 25*s.* per cwt.; for fine picked sorts, 8*l.* is now asked.

GUM OPOONAX.—At to-day's auctions 6 tins of fair small yellow drop were bought in at 5*s.* per lb.

HONEY.—*Jamaica* honey is rather dull of sale, and the greater part of what was offered to-day was bought in. A few lots sold rather cheaply at 28*s.* 6*d.* to 29*s.* per cwt. for good liquid amber, and at 20*s.* to 26*s.* for dark and dull to fair ditto. Fine bright clean amber realised 30*s.* to 32*s.* per cwt. A lot of *Mexican* honey in comb in small boxes was bought in, while 10 half-barrels, partly candied, of disagreeable smoky flavour and rather dirty, sold at 19*s.* 6*d.* to 20*s.* per cwt. A rather large parcel of Australian honey in tins from Melbourne was offered. The quality seemed good,

the honey being liquid and of a brown colour. The parcel was bought in at a nominal price. Another parcel of ordinary dull thick sold at 18*s.* 6*d.* to 20*s.* per cwt.

IPECACUANHA.—There was a large supply of very common woody root, no less than 73 packages of *Rio ipecacuanha* being offered: 49 of these sold at a decline of about 2*d.* per lb. on ordinary woody kinds; a few serons, however, which showed a tolerably quality brought good prices. The following rates were paid: sound rather woody to fair, 5*s.* 6*d.* to 5*s.* 8*d.* per lb.; first-class damages—common and thin to good fair quality from 5*s.* 3*d.* to 5*s.* 10*d.* per lb.; second and third class from 5*s.* 3*d.* to 5*s.* 6*d.* per lb. A parcel of picked root was bought in at 7*s.* per lb. Of *Carthagena* root the large quantity of 30 bags was offered, about 5 of which sold at 4*s.* 2*d.* to 4*s.* 3*d.* per lb. for good stout brown root, and 3*s.* 10*d.* for common. A parcel of 18 bales so-called "ipecacuanha" has just been received from Bombay. It is the same spurious root which was first introduced upon our markets a few years ago.

JABORANDI.—Two bales, imported about eleven years ago, ordinary grey and dull-looking, but bold leaves, were bought in to-day at 1*s.*; the owner would accept 8*d.* per lb. with pleasure, but the demand, as he says, is for samples only.

JALAP.—There is no change in the position, good *Vera Cruz* being still limited at 1*s.* 6*d.* per lb. At the auction to-day 1*s.* 4*d.* was refused for fair quality.

KOUSO.—One case of this drug, which is now very rarely seen at our auctions, was offered to-day. The parcel showed a good quality, in bundles, and was bought in at the rate of 3*s.* per lb.

LIME-JUICE.—At to-day's auctions no interest whatever was shown for this article, of which several lots were offered. Only 2 puccheons sold cheaply at 1*s.* 1*d.* per gallon, "without reserve," for ordinary dirty juice.

MORPHIA is looking up a little in sympathy with the improved position of opium; the price recently was still 3*s.* to 3*s.* 1*d.* per oz., but we hear that some makers now stand out for 3*s.* 3*d.* per oz.

MUSK.—Rather more demand was shown to-day than has been manifested for some time; it was chiefly for rather ordinary qualities, and these sold at pretty full prices. *Tonquin pods*, first pile, small to bold fine thin blue skin and under-skin, were bought in at 74*s.*; old-fashioned ditto, top and under-skin good dried, brought 49*s.*; very damp, 44*s.* 6*d.*; and 1 tin sold without reserve of common and wormy thin-skinned pods, 38*s.* per oz. Fourteen packages third pile were all sold—at 24*s.* to 25*s.* 6*d.* for fair old-fashioned, 20*s.* 6*d.* for damp ditto, and 22*s.* to 22*s.* 6*d.* for thin blue skin but very wormy. One tin of bold *Assam* pods, very hairy and skinny, and unworried, sold at 16*s.* 6*d.* per oz. to-day. Twelve tins *China Cabardine*, very dry, partly skinny, were bought in at 18*s.* per oz.

MUSK-SEED.—At to-day's auctions 7 bags of good quality, imported *viâ* Amsterdam, were shown. They are held for 7*d.* per lb., but that price is not obtainable.

NUX VOMICA.—Owners are firm, but they cannot obtain the limits for which they hold. At to-day's auctions a parcel of 285 bags dark grey, partly perished seeds, from Calcutta, was bought in at 11*s.* per cwt., an offer of 8*s.* 6*d.* being declined.

OIL (CASTOR).—No demand. At auction to-day good pale first Calcutta was bought in at 3½*d.* per lb., and fair seconds at 2½*d.* per lb.

OILS (ESSENTIAL).—*Clove-oil* is now exceedingly cheap English drawn being offered at 2*s.* 2*d.* to 2*s.* 3*d.* per lb.—the lowest prices on record. These figures can hardly pay the distillers. Ten cases of fair *Cajuput* oil were bought in to-day, at 3*s.* per bottle. Fisher's *Patchouly* oil was also bought in at 1*s.* 1*d.* per oz., and good white *Nutmeg* oil from Batavia at 4*d.* per oz. Forty-one packages (drums, coppers, and bottles) of so-called Bombay *Rose* oil were offered for sale to-day. The quality was very inferior, and only the settlings sold at from 1*d.* to 2½*d.* per oz., the "oil" being bought in at from 3*d.* to 6*d.* per oz. Of 30 bottles West Indian essential oils, all newly imported from Dominica, the bulk, containing *Lemongrass* and *Bay* oil of fine quality, was bought in. Four bottles of good *Patchouly* oil sold at 1*s.*

per oz., and *Cuscuta* at the same price. *Caraway* oil is likely to advance with the improvement in the seed; 4s. 9d. per lb. has been the lowest price this article has touched, but the oil from the new seed will probably cost 5s. 3d. to 5s. 6d. per lb. Oil of cinnamon, of fair appearance, was bought in to-day at 1s. 3d. per oz. *Cassia* oil is dull of sale; 10 cases shown to-day were bought in at 3s. 4d. per lb., while another lot, also of 10 cases, sold cheaply at 3s. 3d. per lb. *Star-anise* is again 1d. per lb. lower, one case of good quality selling to-day at 5s. 11d. per lb.

OILS (ESSENTIAL).—THE MITCHAM CROPS.—The crops this year, on the whole, look well; the old peppermint, which is the main crop, has suffered from "snuffblight," but not to any serious extent. The young (of which there is an unusually large plant this year) looks strong and well; this takes the place this season of a large portion of the old killed by the frosts last year. However, it should be remembered that it yields about 25 per cent. less oil than the old plant. Distilling is in active operation, and the returns so far per ton still (about 6 to 7 lbs.) are disappointing, and below expectation. Prices are expected to open about 31s. to 32s. per lb., but it seems doubtful if this figure will be maintained by the growers. Inquiries remain remarkably quiet, though it is certain that a great many large consumers are short of stock, and a good demand is presently expected. *Lavender* is this year perhaps one of the smallest crops on record, and the oil will be very dear; 60s. per lb. is now being asked. Even at this figure the bunch bloom sold at Covent Garden pays better, and as much as 7s. to 8s. per dozen bunches is obtained, which is more than double the price paid last year. *Chamomile* will this season also be a small crop—none has been distilled yet.

OPIUM.—The London market is active, and a considerable amount of business has been done this week at higher prices.

PERMANGANATE OF POTASH.—The prices given in our report of last week were incorrect. No further rise has been made than that announced by us a fortnight ago—namely, 82s. 6d. for large, and 72s. 6d. for small crystals.

QUASSIA.—A parcel of 21 tons dry old wood, last year's import, sold at 7l. per ton.

QUICKSILVER may be had now in second-hand at 6l. 13s. 6d. per bottle.

RHUBARB.—Over 200 cases were offered to-day, of which only a small proportion sold at rather easier prices—namely, from 1d. to 2d. lower. *Shensi*: Druggists' root, even pinky grey fracture, brought 1s. 9d.; medium to bold fair fracture, flat, from 1s. 7d. to 1s. 9d.; small to medium rather dull coat, three-fourths pinky grey, one-fourth dark, round, 1s. 5d.; fair bold pickings, 11½d. per lb. *High-dried* sold at 1s. 3d. for small fair fracture, flat; 9d. to 9½d. for round fair coat and fracture; and 1s. 4d. for medium to bold flat, three-fourths pinky fracture. *Canton*, small to medium flat, good coat and fair fracture, brought 1s. 2d.; and fair round and flat mixed pickings, 1s. 1d. per lb.

SAFFRON.—A fresh rise of 1s. per lb. is reported to-day.

SARSAPARILLA.—Fair native *Jamaica* sold at 1s. 2½d. to 1s. 3d.; ordinary dull ditto at 1s. per lb. For rather lean *Honduras* (which has recently been selling at 1s. 4d. per lb.) an offer of 1s. 2d. per lb. was to-day refused. Rather damaged and dark genuine *Jamaica* brought 1s. 2d. to 1s. 4d. per lb.

SENNA.—The first arrival of new-crop *Senna* was offered to-day; the quality was not particularly fine, and the consignment had not been reached when we went to press. Old leaves were rather neglected, though for anything of good appearance high prices are paid. Fair medium to good greenish brought 4½d. to 6½d.; common dull to medium yellowish, 1½d. to 3½d.

SHELLAC.—The market closes flat, with sellers of orange TN for August at 82s. 6d. per cwt.

TEA.—Congous are a quiet market, though the heavy sale on Wednesday went at better prices than were anticipated. N.S. Monings for price look cheap enough, and clean sweet teas of Ningchow sort at 5d. to 6½d. ought to go into consumption, and only want a little export demand to send the

quotation up ½d. per lb. Retailers seem to prefer low-priced Assams and Ceylons, and to ignore the improvement that these Monings give to a blend. Assams went rather easier on Monday, especially for fine broken, and as Irish buyers are badly wanting these grades a fair trade has resulted. On Tuesday a heavy Ceylon sale went steadily, especially for lower grades.

TONQUIN BEANS.—About 14 packages *Pará* beans were forced off to-day at an irregular decline of 2d. to 4d. per lb., fair frosted *Pará* selling at 2s. 1d.; black, slightly frosted ditto, 1s. 10d. to 1s. 11d.; somewhat foxy mixed, 1s. 4d. to 1s. 6d.; ordinary foxy and mouldy, 1s. 1d. to 7d. per lb.

VANILLA.—About 250 tins were offered at auction to-day, the whole of which sold at an advance of 1s. to 1s. 6d. per lb. on good qualities. The following prices were paid:—Fine chocolate, crystallised, 8½–9 inches 19s., 7–8 inches 14s. to 17s.; fair chocolate, 6–7 inches, 10s. to 13s.; smaller and brown pods, 7s. 3d. to 10s. 6d.; common foxy, 4s. to 5s. per lb.

WAX (BEES').—*Jamaica* wax is firmly held and sells at full prices: good orange and red, 7l. to 7l. 5s.; mixed brown, at 6l. 15s. to 6l. 17s. 6d. per cwt. For fair mixed Australian 6l. 12s. 6d. was paid. *Madagascar* wax remains flat, and only a few lots out of the 1,113 packages offered were sold; ordinary grey brown at 5l. 2s. 6d., to fair yellow, 5l. 10s.

THE LIVERPOOL MARKET.

BALSAM (COPAIBA).—Large business has been done, at prices ranging up to 1s. 10d. for *Maranham* bright, and now holders are asking more money.

CANARY SEED.—The chief feature of the week has been the continued and important advance in this article: 1,800 bags have changed hands, during the past three days, at 70s. to 72s. 6d., and now 75s. is asked. The failure of the Dutch crop is confirmed.

GINGER.—*African* has recovered, and sales of good root have been made at 31s. per cwt.

GUINEA GRAINS.—A recent arrival of 50 bags good seed sold at 22s. 6d. per cwt.

OIL (CASTOR) continues in the same stagnant condition. Good second Calcutta is quoted at 2½d. per lb. ex quay, and 2½d. per lb. ex store. First-pressure French is steadily held at 2½d., and second 2½d.

QUILLAIA.—This bark is firmer, and 13l. has been paid for a recent arrival ex quay. Price now, 16l. 10s. to 17l.

TURPENTINE seems to have taken a turn for the better, and now 22s. 6d. is asked.

THE DUTCH MARKET.

AMSTERDAM, August 12.

ALL the analyses for the cinchona-bark sales on August 25 have now been published. The manufacturing bark contains about 18½ tons sulphate of quinine, or 4.63 per cent. on the average. About 1 ton contains 0.1, 2 tons 1.2, 41 tons 2.3, 117 tons 3.4, 127 tons 4.5, 60 tons 5.6, 17 tons 6.7, 20 tons 7.8, 4 tons 9.10, 1 ton 11.12, 9 tons 12.13 per cent. sulphate of quinine.

THE SMYRNA OPIUM MARKET.

SMYRNA, Wednesday night.

SALES of 65 cases opium were made here this week, at the parity of 6s. 8d. per lb. f.o.b. for usual kind of manufacturing opium, and of 7s. per lb. f.o.b. for good Yerli opium for manufacturing purposes. The market closes dearer.

LONDON DRUG STATISTICS.

THE following figures refer to the stocks of drugs in the port of London on July 31, 1892 and 1891, and to the imports and deliveries during the first seven months of the years 1892 and 1891.

Article	Stocks		Imported		Delivered	
	1892	1891	1892	1891	1892	1891
Alses ..os & pkgs	6,440	7,607	1,877	1,278	2,539	3,424
.. ..gourds	1,077	1,243	—	315	28	241
Anise, star.....chts	187	144	220	425	75	328
Arrowroot ..chts	6,497	6,998	11,738	10,164	8,169	10,050
.. ..bxs & tins	685	1,704	1,380	618	1,628	1,109
Balsams ..cks, &c.	1,844	2,345	1,023	1,026	733	849
Bark (Oinchona),						
S.American cases	58	388	27	18	341	38
.. ..bis, &c.	25,215	25,470	7,659	6,653	8,935	7,384
E.I., Ceylon, and						
Java ..chts	215	34	205	448	238	417
.. ..bis, &c.	18,124	24,907	21,721	28,025	25,608	27,392
Exorax.....pkgs	261	261	—	25	—	25
Calumba	552	840	324	122	419	591
Camphor	3,503	6,071	4,142	6,347	4,966	5,878
Cardamoms ..chts	680	477	2,019	1,161	1,783	1,308
Coco. Ind. bgs, &c.	1,181	572	1,094	483	405	136
Cream of Tartar cks	14	10	5	6	1	19
Cubebes ..chts	115	93	211	95	210	243
Cutch ..chts	2,970	3,682	2,215	1,661	1,863	1,495
Dragon's Blood chts	114	103	172	117	157	108
Galls, China ..cks	1,977	2,269	1,994	1,191	1,626	1,543
T'ky & Pran.....cks	3,474	3,942	2,853	6,461	1,572	6,513
Gambier ..chts	1,615	893	6,731	5,873	6,611	5,891
Gums—						
Ammoniac cks	232	65	278	15	123	23
Animi & Copal						
pkgs	10,782	5,119	14,503	6,851	9,723	10,238
Arabic.....	12,254	14,946	10,923	13,579	15,997	15,068
Asafoetida ..	414	719	216	38	332	149
Benzoin	2,379	3,217	1,417	2,335	2,063	2,038
Damar ..	4,035	5,586	2,784	2,673	3,014	3,634
Galbanum ..	31	40	—	37	5	27
Gamboge ..	81	57	209	151	163	124
Guaiacum ..	185	122	98	263	40	172
Kino ..	9	10	10	14	18	37
Kowrie ..chts	1,426	957	2,173	1,966	1,791	1,746
Mastic ..pkgs	19	28	—	36	12	26
Myrrh ..	214	450	132	512	278	484
Olibanum ..	5,621	5,952	6,759	5,858	5,336	4,498
Sandalac ..	974	544	1,277	1,025	737	684
Tragacanth ..	2,687	5,241	3,715	4,330	4,713	4,223
Guttapercha.....tins	2,806	2,498	1,358	1,682	1,150	1,231
*Indiarubber, E.I.,	215	338	479	710	543	568
Madagascar ..	86	121	165	186	192	156
S. American ..	88	63	174	130	142	120
African, &c. ..	200	234	231	252	266	264
Ipecac.....cks & bgs	458	141	978	608	925	718
Jalap ..	35	64	255	140	297	186
Lac Dye ..chts	4,945	5,033	—	—	24	61
Nux Vomica pkgs	1,573	504	2,904	1,031	1,796	1,135
Oils—						
Custor ..cks	128	117	368	460	315	499
" ..	2,312	3,061	2,178	4,778	3,283	3,575
Coccol-nut.....tins	1,391	2,148	1,743	3,636	2,342	2,648
Olive ..cks, &c.	1,225	1,218	1,956	3,056	1,505	2,484
Palm ..chts	21	11	56	34	53	30
Rhubarb.....chts	444	513	801	540	764	877
Safflower ..bbs, &c.	142	233	26	—	129	92
Sarsaparilla ..bbs	378	253	707	587	668	641
Senna ..bbs, &c.	1,679	2,907	889	1,358	2,057	2,362
Shellac, Orange						
chts, &c.	27,165	25,415	18,495	15,433	18,091	26,066
Garnet ..	7,909	3,471	11,623	5,381	5,647	5,951
Button ..	6,005	6,351	5,412	7,569	5,893	6,714
Total cchts, &c.	41,080	35,237	35,530	28,413	29,631	38,731
Sticklac cchts, &c.	209	735	180	200	722	1,734
Turmeric, Beng.tins	96	763	18	—	367	385
Madras, &c....	307	178	438	41	316	358
Total ..tins	403	946	616	41	683	743
Vermilion, cchts, &c.	53	26	53	93	26	102
Wax, bees' ..bbs & cks	1,474	902	2,767	1,676	2,145	1,618
" ..cks & os	1,437	781	1,686	992	1,210	1,073
" ..cakes	42	14	28	6	—	16
" Japan ..pkgs	391	522	625	75	618	735

* Liverpool stock: Para 817 tons, other sorts 937 tons; total 1,754 tons, against 2,529 tons last year and 1,279 tons in 1890.

THE CUSTOMS DUTIES.

THERE is a growing movement, particularly among nations claiming to lead the van of civilisation, towards a revival of some of the most distinctive features of the Middle Ages. Thus we hear many voices advocating the re-establishment of the mediæval system of guilds; "Companies of Adventurers" for transmarine exploitation arise at every town, and everywhere we meet with increasing numbers of those who, with Heine's Philistine fellow-traveller in the "Journey to Germany," regard the Custom House as the highest conception of creative genius, and would measure a nation's enlightenment by the ingenuity it has shown in the creation of those relics of a barbarous feudalism. Nothing is more certain than that Custom Houses must be ultimately swept away; but in the meantime the best we can hope for is that they shall be as inobtrusive as possible. And in this country, at any rate, we have the satisfaction of collecting a comparatively larger revenue upon fewer articles, and in a less cumbersome manner, than is done by any other nation. To these facts, the thirty-sixth report of the Commissioners of Customs, which has just been issued, bears witness. The vastness of John Bull's powers of absorption is demonstrated by the fact that the inhabitants of these happy isles paid away 21½ millions sterling in spirit-duties last year, against 20½ millions the year before. Bare figures such as these hardly impress the imagination of the ordinary man, and it requires the aid of such devices as are put forth by the excellent organisations we are all familiar with, and by which we are shown at a glance, on a coloured plate, how many churches and Sunday-schools might have been built, how many missionaries sustained, and what numbers of the deserving poor pensioned off with the money, to give us an approximate idea of the magnitude of the sum. It is said by our usual political instructors that the next Budget is to establish what is known as a "Free Breakfast-table," an expression which should not be taken in sense more literal than what it is meant convey—viz, the abolition of the Customs duties upon tea, cocoa, coffee, chicory, and dried fruit. If that reform should be carried out it will diminish the Customs revenue (on last year's basis) by 4,125,337½, of which the fourpenny tea-duty alone counts for 3,424,830½. The consumption of tea, by the way, increases by from 3 to 4 per cent. a year. The "free breakfast-table" will knock off at a swoop eleven of the forty-one classes of dutiable commodities known to British law, leaving only tobacco, wine, beer, alcohol and alcoholic preparations, and playing-cards in the tariff.

The receipts of duty upon chicory and coffee have diminished, while those on cocoa show the largest increase in any department of the Customs—viz., 66 per cent.—the gross revenue from that article having reached 91,459½, while the consumption of cocoa has increased 34 per cent. within the last five years. The increasing supply of green fruit, and the extension of orchards in this country, operate adversely upon the revenue from raisins and currants, although the former head, nevertheless, shows a large increase upon the previous year, when the failure of the sultana-crop seriously affected the receipts.

The quantity of foreign spirits delivered for methylation was only 656,000 gallons, against 1,306,000 gallons in 1890. This diminution arose from the fact that, mainly in consequence of the scarcity of grain and potatoes in Eastern Europe, the price of foreign plain spirit had risen to such a level that it became more profitable in many cases to use British distilled spirit for methylating. Of perfumed spirits 32,027 gallons were imported last year, upon which a duty of 26,401½ was levied. Customs duties are collected also upon a number of minor articles containing alcohol. As spirit is liable to a very heavy duty, the inclusion of all its preparations is, of course, unavoidable; but the collection costs the country more than it is worth. Thus, the total receipts of duty upon chloroform were 13½, upon collodion 44½, and upon acetic ether 23½. Butyric ether brought in 129½, sulphuric ether 19½, iodide of ethyl 6½, and varnish containing alcohol 54½.

SOLOIDS is the name which Messrs. Barroughs, Wellcome & Co. have given to tabloids for making antiseptic solutions.



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulae consult the last volume, if you have it.

Letters, queries &c., will be attended to in the order received.

Laudanum Prosecutions.

SIR,—Your Legal Report for last week contains an account of the prosecution of three Nottingham druggists for selling laudanum of deficient strength.

In two of the cases this proceeding appears to have been fully warranted by the certificate of the analyst; but in the third—viz., that of Mr. A. E. Beilby, of Ilkeston Road—the prosecution (which was, fortunately, unsuccessful in its object) was perfectly unwarranted by the facts of the case. According to the certificate of the analyst, the laudanum in question contained '51 per cent. of morphia; and the case of the prosecution was that it should, as stated in the British Pharmacopœia, contain "about '75 per cent. morphia."

The latter statement is incorrect. We have recently estimated a number of samples of this tincture, prepared with great care from opium of standard quality, and the highest yield of morphia we have been able to get from the tincture is '68 per cent. On the contrary, one of the tinctures contained as little as '51 per cent., and the average of a number of samples is only '57 per cent. The pharmacopœial statement evidently proceeds upon the assumption that the opium employed in making the tincture is perfectly exhausted of its alkaloids, but this is not the case.

As it is quite possible that similar prosecutions, involving both character and reputation, and sometimes, perhaps, even more than this, may be instituted in other parts of the country, we think it best to take the earliest possible opportunity of placing the above facts on record.

We are, Sir, yours faithfully,

E. H. FARR.

R. WRIGHT.

Indian Opium in Pharmacy.

SIR,—The Financial Commissioner of Burma has by a recent enactment compelled chemists and druggists in this part of Her Majesty's dominions not only to contribute to the opium revenue by taking out a licence, but, what is far more serious, they are obliged by the terms of their licences to draw their supplies of this important drug from the Government, or, in other words, they must ignore the B.P. and use the inferior Indian opium, a prohibitory duty being placed on that imported from Europe. This ignorant and ill-advised measure has aptly been denounced as "an audacious attempt to alter the British Pharmacopœia," and we think the subject is a fit one for criticism in your widely-read journal.

Yours very respectfully,

Rangoon, July 15.

HOSIE & Co.

Anglo-Indian writes:—In looking up the papers read before the last British Pharmaceutical Conference published in the "Year-book," I find Mr. E. M. Holmes writing, "It is a startling fact that India, which produces an immense quantity of opium, does not supply this country with the drug used in medicine," and "even the Malwa opium, which simply pays duty, never enters the retail drug-trade. Yet there is no reason why India instead of Turkey

should not supply the whole world with medicinal opium." In the discussion that followed this paper Mr. Dott said that this opium "was unsuitable for making morphine," and Mr. Conroy that "he thought that the Indian opium would make a very nauseous tincture, and that it would not be suitable for galenical preparations."

Truly "a little knowledge is a dangerous thing"! What a pity no Anglo-Indian pharmacist was present at the Conference to explain to these gentlemen the position of opium in India! I think most Anglo-Indian pharmacists will agree with me that it is "not at all startling" that Indian opium is not found on the London market when considering the all-important question of price. The present market value of Indian opium, duty paid, is 13s. per lb., comparing with Turkey opium of admitted pharmaceutical superiority at 7s. per lb. And it is certain that the Indian opium will not be improved or altered one jot until the Chinese have altogether ceased from taking it, or until an English Government abolishes the duty, and probably makes India bankrupt.

The Chinese are taking less opium from India every year for three reasons. First, because they now grow the poppy, and make opium themselves; second, because they now import Persian opium, which, not paying a very heavy revenue, is cheaper than Indian opium; and, thirdly, because the Indian opium has had any amount of "cold water" thrown on it of late years, and the acreage under poppy-cultivation is constantly decreasing, to meet the wishes of politicians at home. If India should cease exporting opium altogether, the Chinese would buy it somewhere else, and then Persia and Turkey would reap the benefit. Your druggists' opium would rise enormously in value, for neither of the two mentioned countries would be able to meet the demand of the Chinese.

If the English Parliament should abolish the opium revenue, but not prohibit the export of the drug, then an immense incentive would be given to the growth of the poppy, and we should probably find China taking more than ever and in increasing quantities, and perhaps then the members of the British Pharmaceutical Conference would see the Indian opium replace very quickly both Turkey and Egyptian opium. Mr. Dott says Indian opium is unsuitable for making morphine; this is not quite correct. Morphine is actually made in India in small quantities, from the waste of the opium-factories, together with other alkaloids, as codeia, which alkaloids have actually been sold in London on the market.

Mr. Conroy is quite wrong in his ideas that the Indian opium is not suitable for galenical preparations, and that it makes a nauseous tincture. There are probably not one dozen pharmacists in India who use B.P. opium in their preparations. Malwa opium, which is universally used, makes a bright and by no means nauseous tincture, dries and powders into a fine light-brown powder, with a loss of 23 per cent. by evaporation, and yields high-class solid and liquid extracts. It is really pitiful to think that so much time was wasted discussing that one poor dried Bloomsbury Square Museum specimen exhibited at the Conference of 1891.

The Sale of Poisonous Medicines.

SIR,—I have just read your remarks *re* the sale of poisonous proprietary medicines in your issue of this date, and would like to state that I find your opinions fully endorsed by all qualified chemists to whom I have spoken concerning this question of illegal sale of poisons.

They are surprised at the reticence displayed by the Council in this matter. We heard a deal about prosecutions to be, but how little has been done, and how absurd appears the notion to send a circular to registered chemists! I hope the Council will not continue this half-hearted attitude towards such an important matter, but at least attempt—if not accomplish—something that will be to their credit and for the good of duly qualified chemists.

Yours very truly,

Fraserburgh, N.B., August 13.

A.P.S. (94/12.)

SIR,—The important notice issued by the Pharmaceutical Society on August 13 must cause surprise, perhaps consternation, right through the trade.

Looking over a list of sugar-coated pills issued by a firm of wholesale druggists, I find that out of ninety forms thirty contain a scheduled poison—all, be it remarked, medicinal doses not nearly the maximum, and to which it seems a practical absurdity to apply the word "poison." Yet the notice says all proprietary preparations, whether bearing a medicine-stamp or not. Possibly it may be argued that sugar-coated pills, made by any firm, and largely advertised with name and address, are not proprietary medicines.

Admit it to be an open or undecided question, it still hangs over the heads of pharmacists. If the word "poison" is to be applied everywhere to two pills that contain a small medicinal dose of any scheduled poison, surely the too common use emasculates it, and renders a potent danger signal impotent.

The Council of the Pharmaceutical Society say the law is interpreted in the interests of the public, and warn all pharmaceutical chemists and chemists and druggists. Do they, or any other medical corporation, also intend to warn that large body of general practitioners who, for the most part, dispense their own medicines, and are not amongst the smallest distributors of coated pills? I trow not. Probably a worse case to defend than the Davenport could hardly have been found, because the very potency of chlorodyne certainly requires great caution, and the word "poison" might be well and legitimately applied; but there are dozens—probably hundreds—of good patent or proprietary medicines, containing only small doses of scheduled poisons, that have been taken to the public interest and benefit; and now, apparently, the time is approaching when that awkward Act of Parliament is to be enforced—I say awkward, because Acts of Parliament are not elastic, and often fail because of their inelasticity.

Whether the Council of the Pharmaceutical Society are supine on trade matters, or acting with determination to put down what has been allowed to go on nearly unchecked since the Pharmacy Act was first called into existence, the weapon with which they kill their foes should not also slay friends.

I am, Sir,
A PHARMACEUTICAL CHEMIST. (95/15.)

August 15.

Samples from a Grievance-Factory.

SIR,—Would it not be well if we could have a definite expression of opinion from one set in authority on several important and interesting matters, such as the following?—

1. Is it not fair to give notice to grocers, stores, &c., at the time of renewing their licences, that it is the intention of the Pharmaceutical Society to carry out the Poisons Act in reference to patents containing such poisons? As the Pharmaceutical Society has been asleep for at least ten years, they ought to apprise their victims that they are now awake.

2. Should we not know whether the maker or retailer is liable to fine?—or we shall have a large crop of perfectly innocent persons fined.

3. On what principle, or by what authority, is a person fined for selling a preparation when there is no B.P. form for it? *Vide* castor-oil pills, &c.

4. How to obviate the difficulty of a variety of judgments from Somerset House relative to labels liable to stamp-duty.

5. How to avoid being dragged into court for selling an article of rapid evaporation, and listening to an inexperienced analyst lecture on the diagnosis of some intricate disease, and finish by the presiding J.P. fining an innocent chemist for what neither he nor the analyst could avoid.

6. In case of mixing a bottle of liniment containing lin. aconiti meth., for instance, is it needful to state on the label "aconite—poison"; or is it needful to register or label "poison" a mixture containing spt. chlorof. or aqua chlorof.?

Yours very respectfully,

August 15.

TERPIDUS. (95/1.)

Water-analysis.

As a supplement to a reply to a correspondent in our issue of August 13, Mr. J. Alfred Wanklyn sends us the following historical note:—

A quarter of a century ago, when modern water-analysis

took its rise, the authors of new processes had exceptional opportunities, and it was just then that the now well-known ammonia process was started by myself with the co-operation of my colleagues the late Mr. Chapman and Mr. Miles H. Smith. Our first publication took place on June 20, 1867. Early on that day I was called before the Duke of Richmond's Water Commission, and later in the day I appeared at the meeting of the Chemical Society and read out the paper on our new process of water-analysis.

At that time the leading authorities were on the look-out for any method promising to throw light on a very obscure subject, and within a few weeks an opportunity of giving a practical demonstration of the new method was afforded me by Dr. William Allen Miller in the laboratory of King's College, and another opportunity was given to my colleague Mr. Chapman by Mr. Way in the laboratory of the Rivers Pollution Commission. And out of London our process was investigated by Dr. Parkes at Netley and by Dr. Angus Smith in Manchester.

The gentlemen just named were representative men. They were in positions of great trust, and they had the confidence of their professional brethren in a high degree. They were, moreover, Government officials—Mr. Way being, indeed, at that time the chemical member of the Royal Commission on the Pollution of Rivers. They all of them adopted our process of water-analysis, and conspicuously abstained from the employment of Dr. Frankland's, in the very important official investigations they were called upon to undertake. Mr. Way's analyses of waters for the Rivers Pollution Commission were shown to me by himself. Dr. Angus Smith's verdict on our water-analysis is to be found in his classical treatise on "Air and Rain." It is most generous and typical of the man. And no less favourable is Dr. Parke's account of our process in his celebrated book on "Hygiene." Dr. Miller's appreciation of the ammonia process was well known to his contemporaries.

The same causes which had led the eminent chemists just named to adopt our process and to abstain from the adoption of Frankland's process have operated in a similar manner upon other chemists; and in later years, when Sir Henry Roscoe was called on to analyse Thirlmere water, he used the ammonia process and avoided Frankland's combustion process, as I had the satisfaction of hearing with my own ears in the parliamentary committee-room when the Manchester Water Bill was before Parliament. In point of fact, the ammonia process of Wanklyn, Chapman, and Smith is all but universally adopted, and has proved itself to be especially adapted for official employment.

New Malden, Surrey, August 15.

The British Pharmaceutical Conference.

SIR,—The departure from the usual course of having the British Association and the Conference meetings concurrently may have some advantages; but I have my doubts about its success generally, for the British Association offers many inducements, by the facilities to inspect public buildings and factories, not so readily obtained by the Conference. The fact of a fortnight intervening between the British Association and Conference meetings prevented me—as it would probably others—from going to Edinburgh. I was with the Conference in 1871, and it may not be altogether out of place if I record an incident of the visit, which was strongly impressed on my mind at the time, and it would be well to avoid next week. By the Committee of Management a public dinner was given at the Royal Hotel—6s. 6d. each: not too much, although it was quite enough for the spread. The great cause of complaint was the mistake of making a select table for the local men and some few others, whilst the lower end of the table was very much neglected. A well-known member of the Council sat next to me, and a medical man on the opposite side of the table; both complained of the want of courtesy, which was evidently so different in every respect at the upper end of the room. Let the local men be distributed amongst the visitors, and show that there is no partiality manifested. My only motive in writing is to guard against such a complaint as was then made by the medical man, who said, "Had I known that I should be thus treated I would not have come."

A MEMBER OF THE CONFERENCE. (95/66.)

Some Rough on Rats, for Pity's Sake!

SIR,—The subject of poisons, engrossing and interesting as it is just now, has its ludicrous side, as the enclosed charitable appeal will show. Our correspondent is unknown to us, but a "charitable" discretion would exclude his name or neighbourhood from any quotation you may care to make from his pathetic appeal.

Yours faithfully,

1 & 3 King Edward Street, F. NEWBERRY & SONS.
August 16.

[COPY.]

August 12.

GENTLEMEN,—Will you kindly give us a small quantity of your noted "Rough on Rats" for our American sale?

I am curate-in-charge of —, a district situated on the unhealthy marsh-land near —.

We have 7,000 people in the district, all poor working-class people, many of whom are half-starved and ill-clad during the whole of the winter, owing to the scarcity of work at the —, and in the building-trade.

I have a "Parochial Magazine," of 600 monthly circulation, and I will gladly put 600 of your loose advertisement slips in the September issue.

The Bishop of —, the Ven. Archdeacon —, and the Rev. Canon — are well acquainted with our work here, and would, I am sure, give you a favourable account of our endeavours on behalf of the people of this district, until recently known as "—," and certainly one of the poorest districts in the whole of —.

I know you must have many of these appeals; but do, please, give a favourable answer to this one, and

Believe me,
Yours faithfully,

Druggists' Troubles in British Guiana.

We receive the following from a druggist in Georgetown. This confirms an article which we published last week:—

SIR,—Allow me to bring before the public the action of the British Guiana branch of the Medical Board. Some time back the Governor, with the consent of the Court of Policy, passed a Bill, or ordinance, enacting that, after paying the licence to keep a drug-store, the licensee should be further required to pay the sum of \$25 (5*l.* 4*s.* 2*d.*) for a licence to practise as a druggist—that is, to compound doctors' prescriptions. The latter end of section 17 reads thus: "Provided that a licence to sell drugs under this or the preceding section shall not entitle a person to practise as a druggist in the dispensing or compounding of drugs." In British Guiana are many druggists of long standing, some of whom hold certificates from the Medical Board of England, the Westminster College, &c. One, I believe, claims to hold one from the Medical Board of Trinidad. This gentleman, having served seven years as chief dispenser at the Colonial Hospital, Trinidad, the same in Grenada, two years as dispenser on board one of Her Majesty's ships, and having had a drug-store about twenty years, claimed exemption from the required examination (which was required by the surgeon-general of the Medical Board, or branch of the Medical Board), and showed his certificates and diplomas from his College in America, where he had studied. After a lot of official discussion the Board refused to recognise any certificate from the Trinidad Board, which is one of the oldest in the West Indies. I think the Trinidad Board should take up the matter, and put it before Her Majesty's Secretary of State, and let us know if a branch, which must necessarily spring from one root, should not recognise the fruits of a greater branch of the same tree. This is an isolated case, which has come direct under my notice. A gentleman, holding a certificate from some college in England, was foolish enough to submit himself for re-examination, and thus the druggists, who were holding out against this action of the Government, nearly got squashed; but most, if not all, are pretty determined to hold out. The Chemists' and Druggists' Association have held different meetings, and the only thing arrived at is that we await "dormant" the action of the Government or Medical Board. I am unacquainted with the meaning of the word "dormant" as used here; but I suppose it means to lie still, and let the Board or governors do as they please. If so, I must say

that the Chemists' and Druggists' Society is not doing all it should do.

If you agree with me, Mr. Editor, that this matter requires the intervention of the Secretary of State, you, as advocate for "justice," should make endeavours to bring to the notice of the proper authorities the action of the Medical Board.

Yours very truly,

SUB ROSA. (91/70)

Joseph Cowen's Voice-mixture.

SIR,—I trust that none of your West-country readers have had to dispense the following prescription which I take from the *Newcastle Weekly Chronicle* of August 6:—

RESTORING THE VOICE.

2*℥.* of clarified honey

2*℥.* of paregoric

2*℥.* of oil of vitriol

2*℥.* of oil of almonds

and

2*℥.* of syrup of squills.

Mix.

Dose: A table spoonful.

The above being the advice given to "Saffarer, North Devon."

J. BURT.

Worthing.

Against Home-rule in Pharmacy.

SIR,—I desire to write you, as you are the official organ of the Irish Pharmaceutical Society, regarding their School of Pharmacy.

Can the Council not arrange to give a series of prizes or medals to encourage students to attend their school, especially those students from the North who, like myself, have no school of pharmacy to go to? I may take a course at Queen's College under Dr. Whitla, but it is not very suitable, as the Queen's College course is more for medicals.

I envy those pharmacy students attending Bloomsbury Square School, and am thinking that it is not at all a good thing for Ireland to have Home-rule in pharmaceutical matters.

I trust you will use your influence in a leading article, and as best you can stimulate the Irish Pharmaceutical Conn-
cillors. A STUDENT OF THE IRISH SOCIETY. (92/21.)

August 10.

The Half-price Closed Letter Company (Limited).

Mr. John Brothers, of Ashford, informs us that he has been summoned by the Half-price Closed Letter Company (Limited) to show cause why he should not be required to complete the purchase of one of the debentures of the plaintiff company. He asks that others who are or may be similarly threatened will communicate with him in order that a joint defence may be organised.

LEGAL QUERIES.

Consult Alpe's "Handy-book of Medicine-stamp Duty" in regard to patent-medicine questions.

General information regarding the laws affecting chemists and druggists is printed in *THE CHEMISTS' AND DRUGGISTS' DIARY*, 1832, pp. 161-5.

For stamp duties, licences, Customs regulations, &c., see the *DIARY*, pp. 151-9.

94/16. A. C.—The Pharmacy Act applies to the sale of veterinary medicines if they contain scheduled poisons.

94/66. Chlorof. asks: "Is it necessary, in accordance with the Pharmaceutical Society's circular, to label quinine and iron tonic made with aq. chloroformi 'Poison'?" "A. C." (96/1) and "J. H." (96/22) ask similar questions. [Certainly it is, if that document be read literally; but the circular is not an Act of Parliament, and we could not compel the chemist who would so label such a preparation.]

95/11. *H. X.*—An unregistered person may describe his shop as "drug-stores," and may (in Great Britain, but not in Ireland) compound prescriptions which do not contain any scheduled poison.

94/72. *Amicus.*—See answer to "H. X." No substance is legally a poison if it is not scheduled in, or in accordance with, the Pharmacy Act.

94/56. *Hydrometer* asks: "If a customer enters a so-called drug-store and asks for paregoric elixir or paregoric, and is supplied with an article labelled 'Paregoric Substitute,' is not the seller liable under the Food and Drugs Act?" [The label would probably ensure the dismissal of the summons. It certainly would if the magistrate thought it sufficiently explicit.]

92/19. *Radix.*—(3) The possessive case would probably render the preparation liable. (4) The title "soothing-syrup" by itself is not registrable.

MISCELLANEOUS INQUIRIES.

Inquirers will please read the "Memoranda for Correspondents."

A list of "Books for Chemists" is given in THE CHEMIST'S AND DRUGGIST'S DIARY, p. 317.

For all particulars regarding Educational and Examinational matters refer to our issue of September 19, 1891.

Replies to queries are inserted according to the space open in any week, and insertion on any specific date cannot be guaranteed.

Back numbers of our weekly issue, containing formulae, &c., occasionally referred to in answers, can be obtained from the Publisher at 4d. each.

83/40. *W. T. C.*—See our issue of June 4, page 819, for a recipe for liq. santal flav. co, which, we presume, is what you want.

89/14. *Bloxwich.*—You can improve the weed-killer by adding more arsenic. Some of the popular kinds contain an excess of that, whereas we have aimed to give a perfect solution.

89/13. *Nemo.*—The Improved Formula for Pulv Glycyrrh. Co. which Professor Attfield has commented upon in his Pharmacopœia reports is as follows:—

	Parts
Senna	2
Liquorice	2
Fennel	1
Sublimed sulphur	1
Sugar	2
Cream of tartar	4

Mix.

90/29. *Statim.*—You will get the information regarding the apothecaries' assistants' examination from the Secretary, Apothecaries' Company, Blackfriars, London, E.C.

90/28. *Eucalyptus.*—Dugong Oil is an oil made from the blubber of a large fish (strictly speaking, a mammal, *Heiocyte Dugong*, Cuvier), which inhabits the Australian and East Indian waters. At one time the oil was much spoken of as a substitute for cod-liver oil, but the price (from 10s. to 20s. a gallon) is prohibitive.

91/22. *Cuprum.*—Verdigris Ointment for veterinary purposes is made 1 drachm to 1 oz. of lard. This is suitable for castrations.

91/60. *Lancashire.*—As good a Plate-powder as any you can have is plain precipitated chalk. It should be used with

a mixture of equal parts of solution of ammonia, methylated spirit, and water.

91/39. *B. Cunningham.*—(1) The quickest method of filtering or clearing Essence of Rennet is to shake the strained liquor up with fuller's earth, 1 oz. to the quart, and set aside for several days to clear. Decant the clear portion and filter the rest. (2) Why do you ask?

91/20. *Kinarastader.*—Thanks. We have seen it before

92/19. *Radix.*—(1) White Liniment.—February 13, page 249, and April 2 page 493. (2) Corn Paint.—February 28, 1891, page 321.

93/29. *G. D. Coy.*—(1) See our issue of May 23, page 733. (2) Rat-paste without Phosphorus.—Try this:—

Tartar emetic	5i.
Powdered squill	5i.
Carbonate of barium	5ii.
Beef dripping	3iss.

Mix well.

93/27. *Nux Vom.* asks: "In a prescription of recent date what should be dispensed for 'Liq. Tarax.?' " [See April 30, 1892, page 613.]

93/74. *Subscriber.*—We have not a working formula for jelly squares. The finest gelatine (1), sugar (6), and water (20) are the principal ingredients, with flavouring and colour. The figures in parentheses are quantities you may begin experimenting with. Add 20 grains of boric acid to the lo. for preservation.

95/17. *Eddie.*—You can easily make a cheaper cud-ball if you wish it from the formula published August 18, 1888, by substituting pulv. lini for the gran. parad. The balls should not be wrapped.

123/92. *Dens.*—Silver Marking-ink.—See THE CHEMIST AND DRUGGIST, November 15, 1890, page 697.

93/53. *H. D. K.*—Tincture of Coca.—We do not know any recognised formula for this, but it may be made 2½ oz. to the pint of proof spirit.

93/61. *Nur.*—(1) We have seen the caramels advertised in American papers, and that is all we know of them. They are of the nature of chewing-gum, we think. (2) "Nux" also asks: "Would bicarbonate of potash put in flour-paste give the latter the property of resisting the action of wet and rough weather, and so be advantageously used for outdoor bill-posting?" Has anyone practical experience of this?

94/47. *H. G. H.*—(1) Try Messrs. T. Christy & Co. for margosa oil. (2) Women who wish to become dispensers should pass either the Apothecaries' Assistants' examination or the Minor. There is no sex-distinction in either of them.

94/28. *C. & D.*—We have never heard of any firm which supplies pharmaceutical apparatus on the "instalment system," but most firms in that trade give credit to trustworthy people.

95/40. *W. H. H.*—Turpentine is so cheap now that when it becomes coloured by keeping in iron vessels it is scarcely worth the trouble decolorising with chemicals; but you may try shaking up with 2 or 3 oz. of fuller's earth to the gallon. Shake now and then for a few days, set aside to clear, and decant.

94/53. *Heliotrope*.—You should read the medical information given in our last Educational number (September 19, 1891), or in the one which we shall publish next month, where you will get all the particulars you require.

95/18. *Rusticus*.—It is the polish that has been taken off the marble. Use putty-powder and water for repolishing it, finishing off with putty-powder and olive oil.

94/63. *Frost*.—The Depreciation of the Freezing-point of Water by the addition of the mineral acids is so small that we question the utility of adopting the principle in filling show-carboys. Glycerine and methylated spirit are much better.

59/37. *Enquirer* (Sydney) sends a sample of a Cerate for Scissas and Fistula in Horses, made by a vet. now dead. The custom was to apply a plaster of the cerate six or seven days, and at the end of that time, when the plaster was taken away, the growth came with it. We make the cerate out to be:—

Chalk	..	..	..	..	..	3j.
White arsenic	..	..	..	..	..	3j.
Lined oil, enough to make a stiff paste.						

94/65. *Ext Bellad.*—You will find Dunstan and Ransom's Belladonna-assay Process described in THE CHEMIST AND DRUGGIST, 1885, page 509, and in the "Year-Book" for 1885. Briefly it is this: Take 2 grammes [better, five; small quantities mean very delicate balances], treat with dilute hydrochloric acid until as much as possible is dissolved, filter through glass wool, and wash the wool with dilute acid. Treat the acid liquor with chloroform until the latter ceases to dissolve anything. Reject the chloroform washings. Add ammonia in excess to the acid liquor, and extract the alkaloids with chloroform, which evaporate and dry at 100° C.

95/27. *Gympie*.—You will find snitable books mentioned in the DIARY book-list. We should think that they would not be obtainable in Queensland.

95/63. *R. W.*—You express yourself so carelessly that your letter is almost unintelligible. Please give us your views more clearly.

95/62. *Herbalist*.—Mr. A. R. Fox, of Snig Hill, Sheffield, the President, or Messrs. Potter & Clarke, the wholesale herbalists, of Raven Row, E.C., will probably be able to give you all particulars of the Herbalists' Association. Membership does not entitle anyone to sell scheduled poisons.

95/68. *N. Clarkson*.—See reply to "Amina," on August 6, and, for marking-ink, reply to "Dens" in this issue.

95/56. *Indian Ink*.—Please refer to page 829 of THE CHEMIST AND DRUGGIST, December 13, 1890, for a reliable method of removing tattoo-marks.

84/2. *Lac*.—Salicylic acid appears to have been used for preserving the milk, which is the cause of the pink colour.

80/7. *Rosa Alba*.—The white Rose Pomade appears to be made with white vaseline and oil of rose-geranium.

90/46. *Cocoanut*.—We do not think that the rancid cocoanut can be restored to its fresh condition.

70/72. *H. C.*—The Nerve-powder is a dose of anti-febrin.

95/48. *Menthol*.—(1) Most of the preparations For Keeping the Hair in Curl are of the nature of Bando-line, i.e.—

Powdered tragacanth	..	..	..	..	3vj.
Glycerine	..	..	..	..	3i.
Perfumed spirit	..	..	..	..	3i.
Water to	..	..	..	..	0j.

M.S.A.

This is a popular article, but we question its utility. Still, it is more honest than one expensive hair-curler which we examined some time ago, and which turned out to be plain lime-water. But there was virtue in that even, for it would help to deprive the hair of its natural oil, which is the real preventive of curling. We should be inclined to pin our faith to a resinous dressing, such as—

Tinct. myrrhæ	..	..	..	..	3j.
Aq. lavenderæ	..	..	..	..	3ij.

M.

This to be sprayed upon the curls. (2) The secret of keeping the Contents of Smelling-Bottles from becoming liquid is to use translucent pieces of carbonate of ammonia and alcoholic solution of ammonia.

72/56. *Jacobus*.—We cannot detect any active ingredient in the sugar-powder.

76/22. *Harold*.—A Cough-mixture similar to the one you send can be made as follows:—

Syrup of squills	..	..	..	..	3j.
Syrup of black currant	..	..	..	..	3j.
Tincture of senega	..	..	..	..	3i.
Conc. infusion of orange	..	..	..	..	3ss.
Water to	..	..	..	..	3viij.

Mix.

Dose: A dessertspoonful.

139 2. *Mineral Water*—You may make a similar essence for Aërated Stone Ginger beer as follows:—

Tincture of capsicum	..	..	..	3ss.
" " lemon-peel	..	..	..	3vj.
" " orange	..	..	..	3ij.
Strong tincture of ginger to	..	..	..	3viij.

Mix.

An ounce of tartaric acid, and 1½ oz. of the essence to a gallon of syrup. We cannot give a formula for the champagne essence.

91/3. *H. A. G.*—The Solution for Destroying Fungi on Plants is a solution of calcium sulphide. Boil together ½ lb. of lime and 6 oz. of sublimed sulphur in a gallon of water, and decant the clear liquor.

Information Supplied.

95/30. *Tr. Ferri Pyrophos.*—When Dr J. Kidd orders tinct. ferri pyrophos. he refers to the first decimal attenuation (1 in 10, or 1x), prepared as follows (see Keene & Ashwell's "Companion to the Homœopathic Pharmacopœia") :—Dissolve 60 grains pyrophosphate iron in 8½ fluid drachms of distilled water, and then add 1 fluid drachm of rectified spirit. This causes a precipitate at first, but it is redissolved by shaking. C. S. ASHTON.

Information Wanted.

Regies to the following are requested by subscribers of THE CHEMIST AND DRUGGIST.

93/48. "Ship" brand of perforated toilet-paper: who makes?

92/6. Sulphur-cakes for fumigating (composed of sulphur and shavings): who makes?

94/15. Carbolineum: what is it, and where obtainable?

93/4. S. asks: "What can be the explanation of the fact that ammon. mur. will make solder run and adhere perfectly to copper, whilst the ammon. chlor. pur. fails utterly?"

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Soap Makers
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The Prince of Wales.

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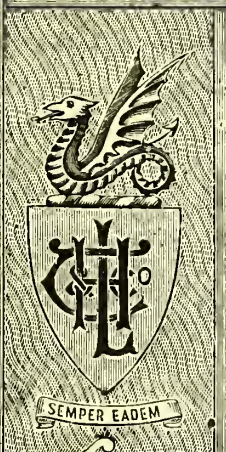


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164 Pulv. Ipecac. Co. ; Pulv. Gum. Ammon. aa. gr. iss. ; Pulv. Scillæ gr. i. ; Saponis Hispan. gr. ss.	7d.	5/-
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TONIC. 370 (Blaud's Formula)	...	6d.	4/-
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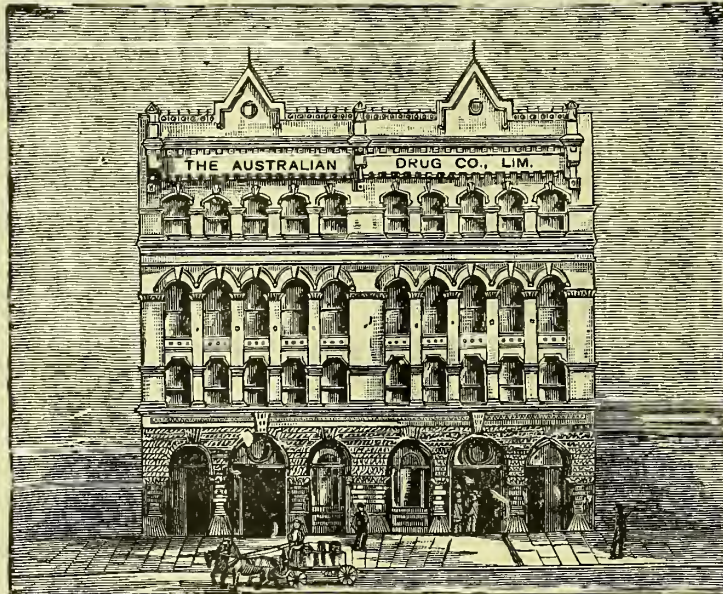
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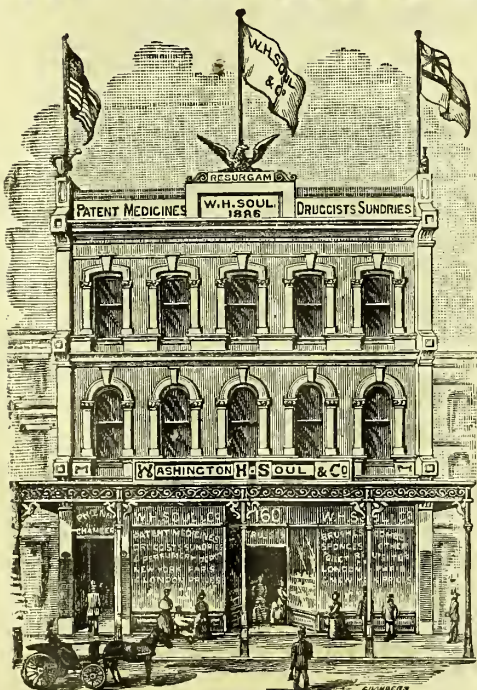
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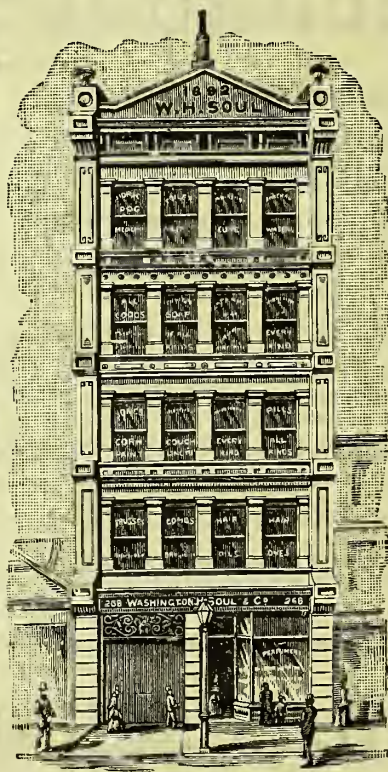
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We think it advisable to inform the Trade that the medicines sold by us do not contain any poisonous ingredient, and can be sold with perfect confidence by Chemists to their own profit and their customers' safety and benefit. Our preparations are now in brisk demand in all parts of the United Kingdom, and our advertising policy will be steadily enlarged.

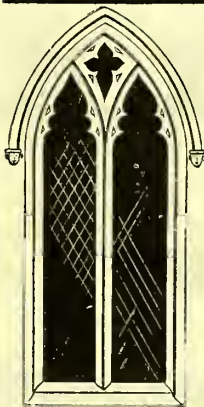
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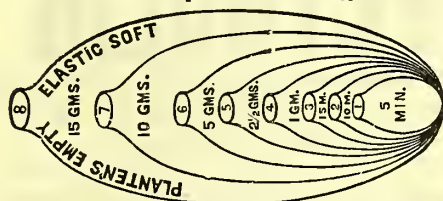
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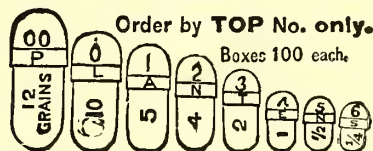
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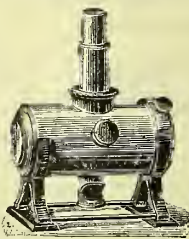
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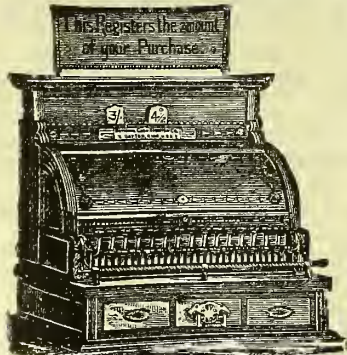


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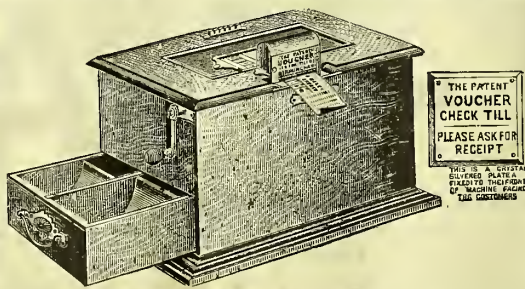
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PARIS EXHIBITION, 1889.

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PACKED IN TINS, 1, 5, 10, 14, 28, 56, and 112 lbs. Also in 3-cwt. Cask.

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UNIVERSALLY ADOPTED BY THE MEDICAL PROFESSION FOR
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For External and Internal Irritation of every kind.

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One Doz. 1s. 6d. Bottles; One Doz. 2s. 6d. Bottles.

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For Public Speakers, Actors, and Singers.
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3. We pay carriage on six 1-gall. tins, or on four 2-gall. tins, and on 10 galls. and upwards, in drums and casks, to any Station or Port in Great Britain.
4. Drums and casks are charged at cost price. Full price allowed when returned.

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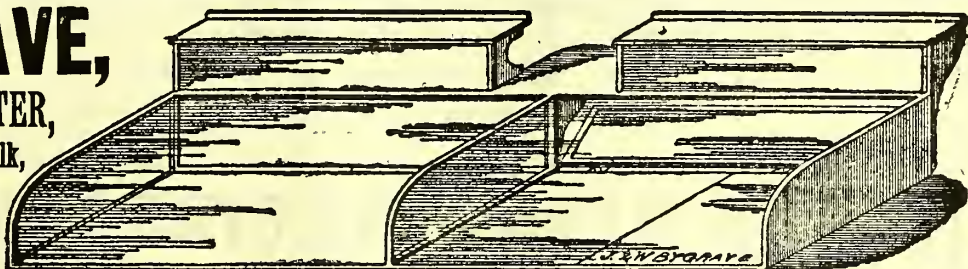
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HONORABLE MENTION **SUPERIOR FINISH**

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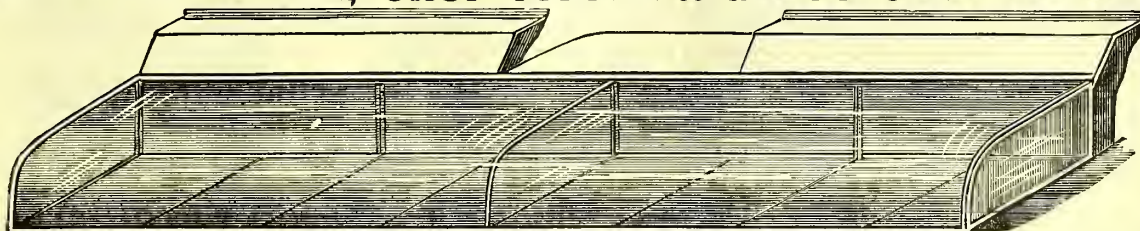
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LONDON, N.



Bent-top plate-glass Counter Showcase, in French polished mahogany, or ebonized, with two upright mirror plate-glass fronted shelves, and table in centre for serving over, and mahogany falls at back lined with mirror plate glass, inside fitted with crimson velvet trays—if 5 ft. long, 18 in. wide, 8 in. high (total height 13 in.). £5 10s.: 5 per cent. off for cash.

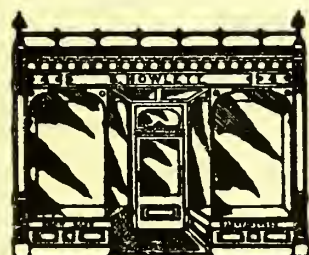
ONLY ADDRESS—NO CONNECTION WITH ANY OTHER HOUSE.

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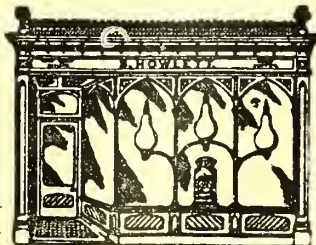


Mahogany and Plate-glass Counter Case, sloping and flat shelf at back, 12 inches high to top of shelf, fitted inside with velvet-lined trays and silvered glass back. 5 feet long, £5; 6 feet long, £5 10s.; 8 feet long, £7.

242 OLD STREET (12 doors from City Road). Works: **HENSON STREET.**
ESTABLISHED 20 YEARS.



ESTABLISHED 1830.
S. HOWLETT,
MEDICAL AND
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Shop-Front Builder and Show-Case Maker.
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SHOPS FITTED by Contract, in Town or Country, with every requisite, on the most improved principles, and at lowest prices.

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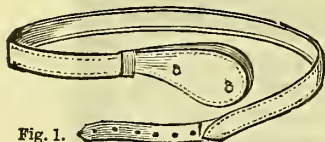


Fig. 1.



Fig. 2.

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Tubes, 2s. each; Half Tubes, 1s. each. Pomade in vials, 3s.
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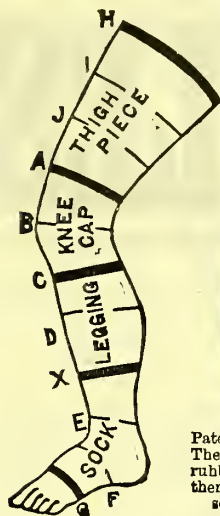
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The Band of this SUSPENSOR being
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It can also be adapted by the
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No one will wear
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Fitted with Galvanic Discs, it is a
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It is specially adapted for Riding,
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FOR THE TREATMENT AND CURE OF ALL

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CLAIMS TO BE A

Specific for all Congestive and Inflammatory Conditions of the Respiratory Apparatus,
And will be found efficacious in

INFLUENZA, COUGHS AND COLDS, ASTHMA, BRONCHITIS,

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Pharyngitis, Laryngitis, Catarrh, Sore Throat, Quinsy, Enlarged Tonsils, Hoarseness, Loss of Voice,
Colds in the Head, Hay Fever, and all other Complaints of the Respiratory Organs.

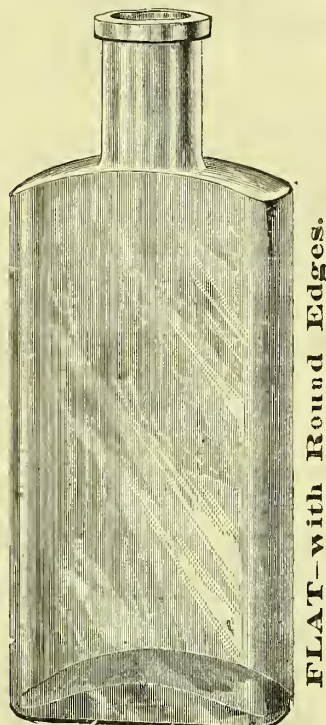
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ALL SHAPES, SIZES, AND COLOURS

DISPENSING BOTTLES.

Green Flint—Flats (ordinary and round edges), Ovals, Direct Squares, Rounds and Octagons.

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Ordinary quality ...	8/-	8/-	9/-	9/-	13/3 per gro
Best " ...	10/-	10/-	11/6	11/6	16/9 "
Screw Stoppered } Washed & Fitted }	10/9	10/9	11/9	11/9	17/6 "

White Vials, plain and graduated.

	$\frac{1}{2}$	1	1 $\frac{1}{2}$	2	3	4 oz.
Ordinary quality ...	3/6	3/9	4/6	5/3	6/9	8/- per gro.
Best " ...	4/6	4/9	6/-	6/3	8/9	10/- "

FEEDING BOTTLES.

No.	$\frac{1}{2}$ -inch Rubber Tube.	Small lots.	2-grs. lots.
1.—Green Bottles, Boxwood Top Corks,			
White Fittings ...		26/6	25/6
3.—Green Bottles, Boxwood Top Corks,			
Black Fittings ...		30/-	29/-
White glass 2/6 per gross extra.			
China tops 1/6 per gross extra.			
64.—Green Bottles, Glass Screw Stoppers,			
White Fittings ...		32/-	31/-
66.—Green Bottles, Glass Screw Stoppers,			
Black Fittings ...		35/6	34/6
White Glass 3/- per gross extra.			

These prices include 1 doz. partitioned Wood Boxes. If Bottles are loose 1/6 per gross less. Supplied each Bottle in Cardboard Box at 5/- per gross extra.

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FEEDING BOTTLES.

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TO MEET THE PREVAILING TRADE COMPETITION

FITTED WHITE RUBBERS

No. 85.—Green Glass Bottle, Wood-top Cork	21/-	per gross.
" 86.—White	"	"	"	...	23/-	"
" 87.—Green Glass Bottle, SCREW GLASS STOPPER	...	...	...	...	24/-	"
" 88.—White	"	SCREW GLASS STOPPER	...	...	26/-	"

FITTED BLACK RUBBERS

No. 89.—Green Glass Bottle, Wood-top Cork	...	...	...	...	23/-	per gross.
" 90.—White	"	"	"	...	25/-	"
" 91.—Green Glass Bottle, SCREW GLASS STOPPER	...	...	...	...	26/-	"
" 92.—White	"	SCREW GLASS STOPPER	...	...	28/-	"

IN QUANTITIES OF NOT LESS THAN ONE GROSS OF A KIND.

EACH BOTTLE IN PAPER BAG.

PLEASE QUOTE NUMBER IN ORDERING.

SEND FOR OUR NEW ILLUSTRATED PRICE LIST, JUST ISSUED.

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Nos. 87, 88, 91, and 92.

We supply over 100 Various Kinds Attractive Feeding Bottles.

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BOTTLES & GLASSWARE.

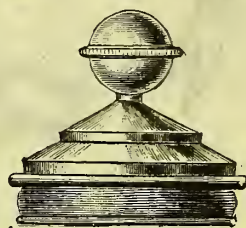
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NEW PATENT AIR-TIGHT CHEMIST JAR.

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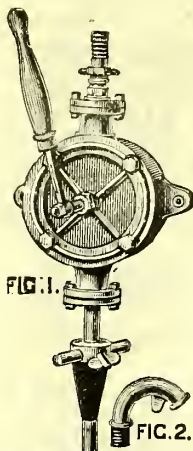
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